CrossTalk

August 2024 *65 Years Of Service To Amateur Radio & Our Community* Issue 65 : 08

A

2024 Club Officers

President :	**Jonathan Pearce, WB2MNF**
Vice President :	**Ronald Block, NR2B**
Treasurer :	**John O'Connell, K2QA**
Recording Secretary :	**John Zaruba Jr, K2ZA**
Corresponding Secretary :	**Michael Resnick, N2WOQ**

Trustees - 4 Year Term

Carl Wittig, N2CRW	**(2021-2024)**
Charles Lanard, KD2EIB	**(2022-2025)**
Sheldon Parker, K2MEN	**(2023-2026)**
Len Rust, W2LJR	**(2024-2027)**

Directors - 3 Year Term

Jeffrey Garth, WB2ZBN	**(2022-2024)**	**James Wright, N2GXJ**	**(2023-2025)**
Frank Romeo, N3PUU	**(2022-2024)**	**Al Arrison, KB2AYU**	**(2024-2026)**
Chris Prioli, AD2CS	**(2023-2025)**	**Bill Price, NJ2S**	**(2024-2026)**

Balloon Launch
Saturday, August 3, 2024 @ 1200 Hours
W2MMD Clubhouse

General Membership Meeting
Wednesday, August 7, 2024 @ 1900 Hours
In-Person & ZOOM : 943 0211 9674, 843147

Tech Saturday Forum
Saturday, August 10, 2024 @ 0900 Hours
W2MMD Clubhouse

GCARC TechNet ZOOM Forum
Every Monday @ 1930 Hours
ZOOM Meeting ID : 933 9943 3123, 800835

License Testing Session
Thursday, August 8, 2024 @ 1900 Hours
W2MMD Clubhouse

Board of Directors Meeting
Wednesday, August 21, 2024 @ 1900 Hours
W2MMD Clubhouse

Tuesday AfterNoon 2M Net @ 1200 Hours
Thursday Night 2M Net @ 2000 Hours

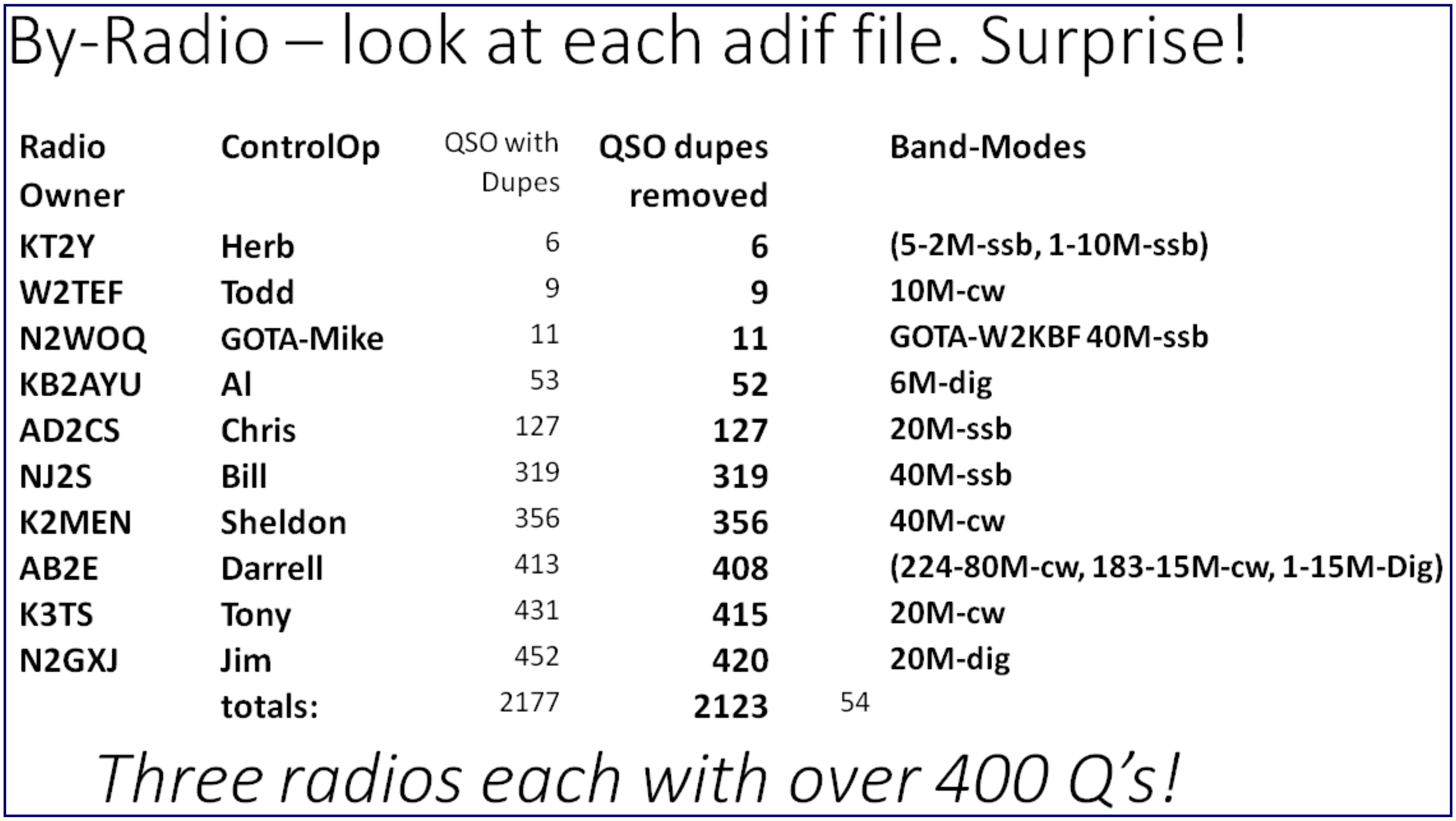
Tuesday & Thursday 10 Meter Net @ 1930 Hours
28.465 MHz or 28.475 MHz

Monday & Thursday Night 40M Net @ 1930 Hours
7.230 MHz (+/- 5 or 10 kHz)

Inside This Issue…

President's Letter .... *Page 3*
Welcome New Members............................ *Page 5*
August 7th General Membership Meeting. *Page 6*
August 10th Tech Saturday Forum........... *Page 8*
Monthly VE Session Summary................. *Page 9*
20M Field Day Antenna........................... *Page 10*
DA's & DIT's.. *Page 12*
Regional Hamfest & Events..................... *Page 14*
The First Balloon Flight! .... *Page 15*
Education Connection.............................. *Page 20*
At The Repair Bench................................ *Page 23*
NG3K Announced DX Operations .... *Page 27*
WA2JRZ First POTA Activation .... *Page 28*
Element 4 Question Quiz .... *Page 31*
ARES SNJ Section Update........................ *Page 33*
Dick Rutan KB6LQS SK.......................... *Page 36*
VMP Report : May 2024 .... *Page 37*
Remote Antenna Switch/Controller Build *Page 39*
General Membership Meeting Minutes.... *Page 43*
Ham CrossWord Puzzle .... *Page 45*
Electronic Tool Tip #8.............................. *Page 46*
Board of Directors Meeting Minutes........ *Page 47*
Club Member Contest Scores.................... *Page 49*
August Birthdays...................................... *Page 53*
August Contest Calendar .... *Page 57*
2024 Club Committees.............................. *Page 59*
Last Page Calendar .... *Page 60*

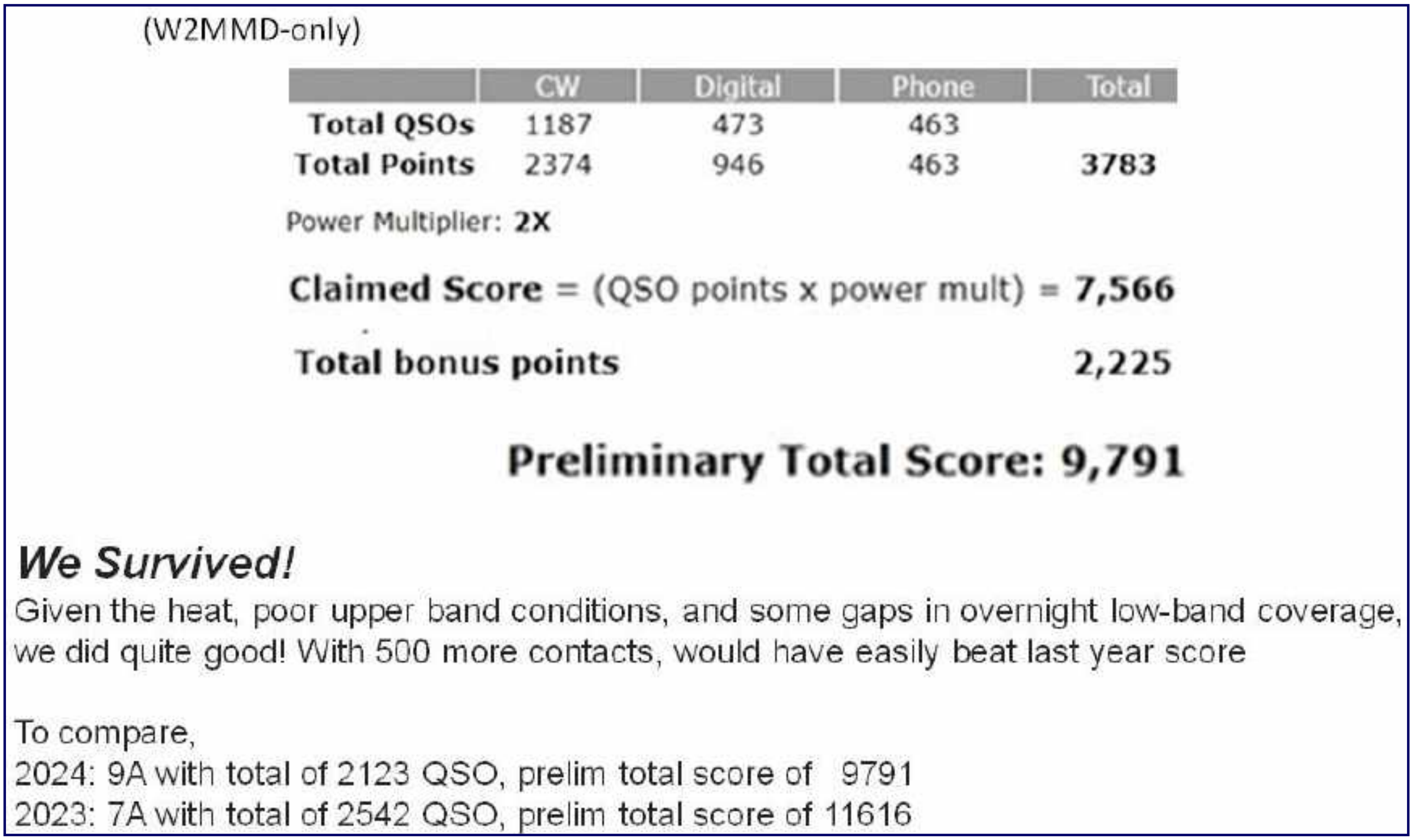
2024 Field Day Preliminary Results



By-Radio – look at each adif file. Surprise!

Radio Owner	ControlOp	QSO with Dupes	QSO dupes removed		Band-Modes
KT2Y	**Herb**	6	**6**		**(5-2M-ssb, 1-10M-ssb)**
W2TEF	**Todd**	9	**9**		**10M-cw**
N2WOQ	**GOTA-Mike**	11	**11**		**GOTA-W2KBF 40M-ssb**
KB2AYU	**Al**	53	**52**		**6M-dig**
AD2CS	**Chris**	127	**127**		**20M-ssb**
NJ2S	**Bill**	319	**319**		**40M-ssb**
K2MEN	**Sheldon**	356	**356**		**40M-cw**
AB2E	**Darrell**	413	**408**		**(224-80M-cw, 183-15M-cw, 1-15M-Dig)**
K3TS	**Tony**	431	**415**		**20M-cw**
N2GXJ	**Jim**	452	**420**		**20M-dig**
	totals:	2177	**2123**	54	

Three radios each with over 400 Q's!



(W2MMD-only)

	CW	Digital	Phone	Total
Total QSOs	1187	473	463	
Total Points	2374	946	463	**3783**

Power Multiplier: **2X**

Claimed Score = (QSO points x power mult) = **7,566**

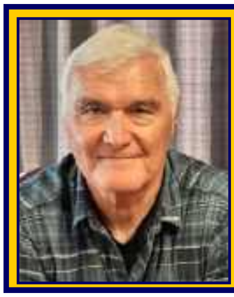
Total bonus points **2,225**

Preliminary Total Score: 9,791

We Survived!

Given the heat, poor upper band conditions, and some gaps in overnight low-band coverage, we did quite good! With 500 more contacts, would have easily beat last year score

To compare,
2024: 9A with total of 2123 QSO, prelim total score of 9791
2023: 7A with total of 2542 QSO, prelim total score of 11616



President's Letter
Jon Pearce, WB2MNF

August 2024

July has been a good month for "firsts" in the GCARC. It shows that we're not standing still - we're moving ahead in many ways. One "first" was the launch of our radio-carrying balloon on July 20, which made it up to over 22,000 feet before descending into the Atlantic Ocean slightly beyond the international waters boundary. That's the topic of another Crosstalk article on page 15 and on the ***"Balloon Adventure"*** webpage.

A New Record Membership Level

At the July Directors' meeting, the board approved six new Club members, pushing the GCARC membership total to 230 for the first time in the Club's history. This significant achievement is the result of several initiatives. Notably, **Chris Prioli AD2CS**'s licensing classes have introduced dozens of new participants to the ham radio hobby and our Club.

Another key factor is our W2MMD Clubhouse, which provides a space to operate ham radio stations, congregate, exchange ideas, build projects, and learn. Additionally, the wide range of activities our members engage in - from traditional amateur radio activities like Field Day, contesting, and antenna presentations to more unique pursuits such as mesh radios, satellites, and radio-carrying balloons - has been crucial.

Among the new members, one hails from Cherry Hill, one from Drexel Hill, PA, and another from North Cape May, areas outside Gloucester County with their own radio clubs. This suggests that hams are willing to travel to a club that is actively "doing stuff." We've consistently heard from members that ours is one of the most active clubs in the area, and potentially beyond, which we hope will continue to drive our growth.

A Wide Variety Club Activities Needed

One of the challenges of Club leadership is to expand the range of activities so that every member finds something of interest. The continuous DX reporting on the listserve helps DX chasers achieve their goals, while the new VHF/UHF equipment and towers aim to attract members interested in using state-of-the-art technology. For those who enjoy socializing, our Wednesday night monthly meetings and some Saturday morning Clubhouse activities provide ample opportunities for "eyeball QSOs."

However, attracting younger potential hams remains challenging. One innovative approach has been to rebrand ham radio as "hacking," appealing to younger enthusiasts. A recent **Hackaday (https://hackaday.com/2024/07/18/are-hackers-the-future-of-amateur-radio)** headline, **"Are Hackers the Future of Amateur Radio"** highlights an initiative by **Dan Romanchik KB6NU**. He engages young technical enthusiasts by describing projects like reprogramming the Quansheng UV-K5, working with satellites, ballooning, and Pi and Arduino projects as "hacking." His slides for these presentations are here : **(https://www.kb6nu.com/there-is-hope-for-amateur-radio)** and are a fascinating departure from some of the more common ways that ham topics are presented.

President's Letter - Continued on page 4

President's Letter - Continued from page 3

Dan also offers a one-day Technician licensing class followed by license testing, which recently resulted in 25 new licensees at a hacker conference. While these new hams may not be as well-versed in traditional radio techniques as those attending GCARC classes, ongoing collaboration with GCARC members on projects could help them develop the necessary skills within the areas of their interests. This approach deserves further consideration by our Club as a way to attract tech-savvy individuals who may be dissuaded by the long commitment required of our current classes.

Tech Saturday Forum - Using Smith Charts For Antenna Tuning

The August 10, 2024 Tech Saturday Forum will build on **Spencer Webb**'s General Membership presentations on antennas, focusing specifically on using Smith charts to diagnose and tune antennas. **Chris Prioli AD2CS** will present a brief overview of Smith Charts using a NanoVNA antenna analyzer. He has also constructed a basic antenna tuner with variable inductors and capacitors to demonstrate how these components can correct impedance imbalances in an antenna. Given the high interest during Spencer's presentation, we anticipate a large turnout for this session.

Tech Saturday Forum sessions start at 9:00 AM and end around 10:30 AM. Afterward, the Clubhouse will be open for general discussion, station operations, and assistance with Club members' technical issues.

Note that the 1st Saturday in August (August 3rd) is NOT Tech Saturday, since it doesn't follow the Wednesday night General Membership Meeting. Tech Saturday will be August 10th.

For upcoming Tech Saturdays, we plan to revisit some technical topics covered over the past few years. This approach ties into the potential ham population in the "maker" or "hacker" groups in that many of these activities relate to amateur radio but some activities can be performed without a ham license. We'll be looking for opportunities to increase our outreach to other clubs and organizations, ham and otherwise, to gather interested people together. Topics will include SDR radio use and various different SDR applications, use of DMR radios with hotspots and other advanced features, satellite operating, Arduinos and other microcontrollers, hacking various Meshtastic devices and other similar topics.

Other August Activities

August will be a busy month for Clubhouse activities! On Saturday, August 3rd we hope to launch our first amateur radio balloon that we hope will circumnavigate the earth, weather permitting. These activities will require the main area of the Clubhouse until the balloon is launched, after which we hope to be monitoring its progress using the main room TV. Ballooning activities are described on page 15 and on the ***"Balloon Adventure"*** webpage.

On **August 31st**, we will host a session on **Meshtastic** radio setup, configuration, and use for a group of newly-licensed hams and non-hams interested in using the unlicensed versions of **Meshtastic** for emergency communications. The configuration of these devices is virtually identical to the ham versions, so we should be able to help this group set up their network. Additionally, we may have the opportunity to highlight some of the extra capabilities that licensed hams have in emergency situations, which could encourage more interest in obtaining a license.

Finally, for anyone interested in the results of my June underwater photo seminar in Little Cayman some pictures are here : **(https://pearcefamily.org).**

73 de Jon WB2MNF

Welcome New Club Members :

Christopher Angelastro, KE2DST, a Technician Class from Cherry Hill, NJ
Deirdre Hebert, AD2GQ, an Amateur Extra Class from Blackwood, NJ
John McGonigle, KC3ZJX, a Technician Class from Drexel Hill, PA
Robert Repetto, KE2DSX, a Technician Class from Blackwood, NJ
Gregg Rudinski, KE2DRM, a Technician Class from North Cape May, NJ
Paul Sandora, an Associate Member from Bridgeton, NJ

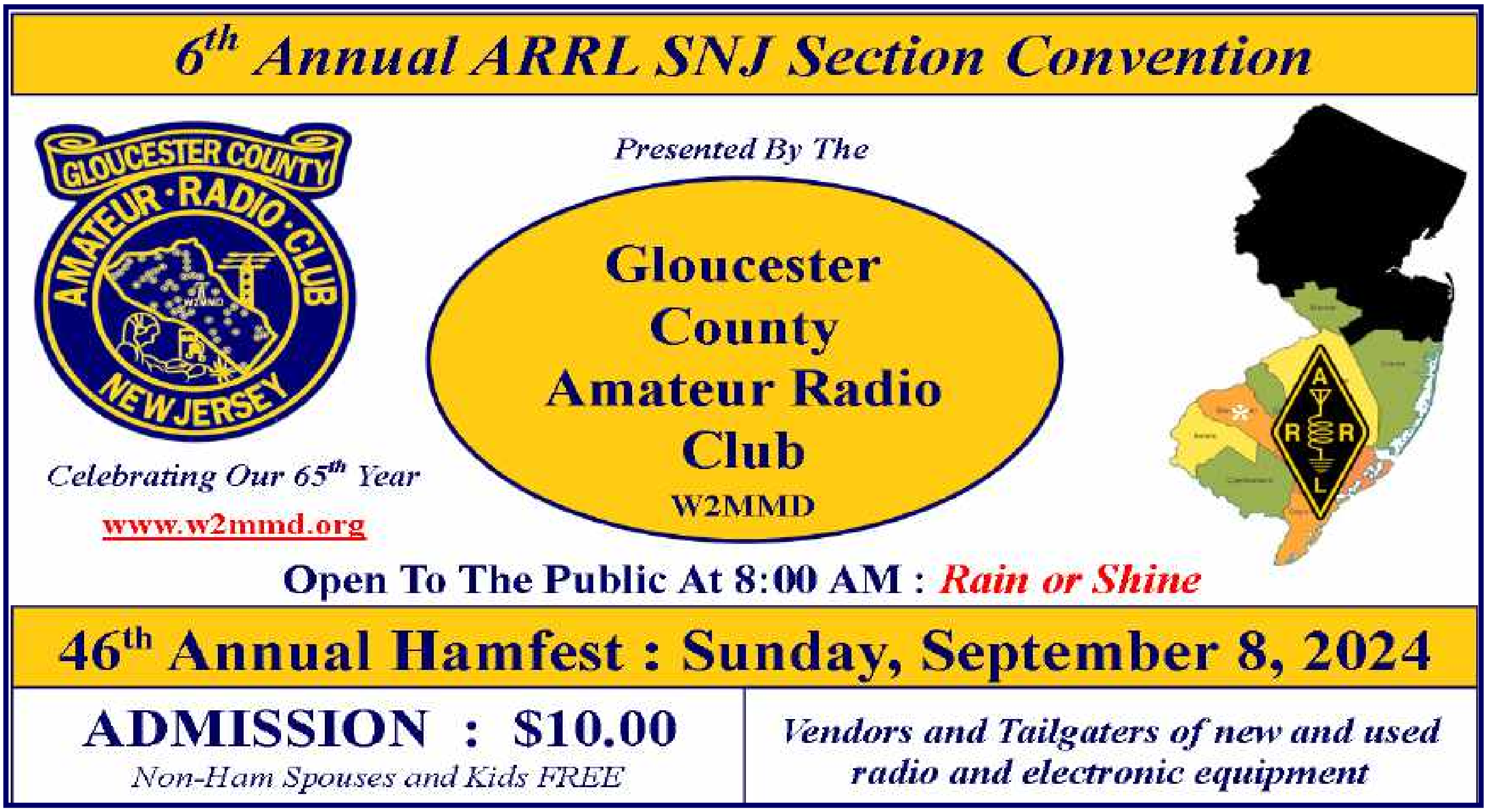
We are glad to have you as members of the Club and hope to see you regularly at Club meetings, events, and activities. Hope to see you at the August 7th General Membership Meeting, either in-person or on ZOOM, the August 10th Tech Saturday Forum, the Monday Night GCARC TechNet ZOOM Forum, and the Dinner @ The W2MMD Clubhouse on August 28th.

We also hope to ***"SEE"*** you on the ***"AIR"*** on the following nets :

- Sunday Night Skywarn 2 Meter Net @ 1930 Hours.
- Sunday Night ARES 2 Meter Net @ 2000 Hours.
- Tuesday AfterNoon 2 Meter Net @ 1200 Hours.
- Tuesday & Thursday Night 10 Meter Rag Chew Nets @ 1930 Hours on 28.465 or 28.475 MHz.
- Monday & Thursday Night 40 Meter Net on 7.230 MHz (+/- 5 or 10 kHz) @ 1930 Hours.
- Thursday Night Rag Chew 2 Meter Net @ 2000 Hours.

All 2 Meter nets are on our 147.180 MHz (PL 131.8) repeater or on EchoLink W2MMD-R.

Tuesday & Thursday Nights 10M Rag Chew Net @ 1930 Hours
28.465 MHz or 28.475 MHz



6th Annual ARRL SNJ Section Convention

Presented By The

Gloucester County Amateur Radio Club
W2MMD

Celebrating Our 65th Year
www.w2mmd.org

Open To The Public At 8:00 AM : *Rain or Shine*

46th Annual Hamfest : Sunday, September 8, 2024

ADMISSION : $10.00
Non-Ham Spouses and Kids FREE

Vendors and Tailgaters of new and used radio and electronic equipment

General Membership Meeting

Wednesday, August 7, 2024 @ 1900 Hours

Pfeiffer Community Center

Simulcast Live Via ZOOM : Meeting ID : 943 0211 9674; Passcode : 843147
Join ZOOM Meeting Link : https://bit.ly/44P4HCU

Go to : www.w2mmd.org to download the ZOOM log-on instructions PDF

End-Fed Half-Wave Antenna : Continuing The Antenna Series

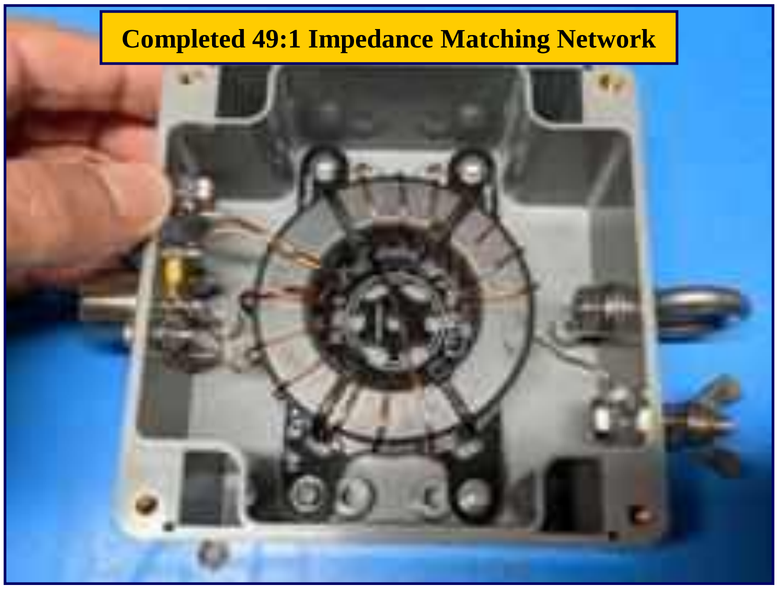
This month we are going to continue talking about antennas. Some of us are in need of a simple-to-deploy HF antenna that will allow us to get on the air. After some discussion with knowledgeable Club members, I settled on the End-Fed Half-Wave Antenna (EFHW) Kit as marketed by the ARRL.

Unlike a dipole antenna, which is composed of two quarter-wavelength wires fed in the center, the EFHW is a half-wavelength antenna with the coaxial cable from your transceiver attached at one end. This antenna, which works on 10, 15, 20, and 40 meters, has an impedance of about 2,500 Ohms and therefore must have a 49:1 impedance matching network to transform the impedance to 50 Ohms for your transceiver.

In this month's video program, **Rob Zielfelder Jr, N1NUG, (https://www.youtube.com/SevenFortyOne),** will build the kit, bench test his work, tune the antenna, and then use the antenna in a POTA activation.

An EFHW antenna does have some issues and we will discuss them after the video. So, bring your curiosity and questions to facilitate our discussion. See you there!

Completed 49:1 Impedance Matching Network



End-Fed Half-Wave Antenna Ready To Deploy

End-Fed Half-Wave Antenna : YouTube & ARRL Links

EFHW End-Fed Half-Wave Antenna Kit | Part One : BUILD
https://youtu.be/2Ee42DJAuBA?si=xLG0EZPr7_f1ABoR

EFHW End-Fed Half-Wave Antenna Kit | Part Two : TEST & DEPLOY
https://youtu.be/LTV25OV4ENo?si=HIWyEYN2OCLh6_d7

EFHW End-Fed Half-Wave Antenna Kit | Part Three : W1AW POTA ACTIVATION
https://youtu.be/MVq02sml8ts?si=sLsh_YYNfW5RmUgT

For written, step-by-step directions, visit :
https://www.arrl.org/end-fed-half-wave-antenna-kit

To purchase an End-Fed Half-Wave Antenna Kit, visit :
https://home.arrl.org/action/Store/Product-Details/productId/133267

Gloucester County Amateur Radio Club
YouTube Channel
https://www.youtube.com/@W2MMD

GCARC TechNet ZOOM Forum

GCARC TechNet ZOOM Forum is scheduled to be available every Monday Night until December 30, 2024.

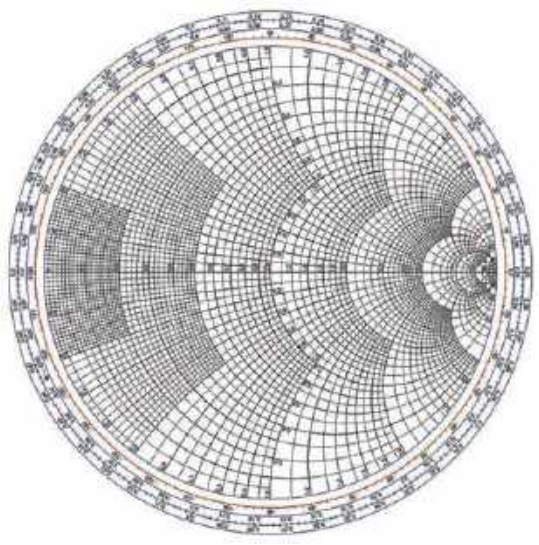
There will not necessarily be a topic scheduled every Monday Night, but the opportunity is available to schedule succeeding topics of interest on consecutive Monday Nights.

Every Monday @ 1930 Hours

Forum Topic : See e-mail and website for more information

Go to : https://gloucestercountyarc.weebly.com/gcarc-technet.html
for TechNet Information Resources and ZOOM Instructions

Meeting ID : 933 9943 3123 ; Passcode : 800835
Join ZOOM Meeting Link : https://bit.ly/3K8bWwj



Tech Saturday Forum

August 10, 2024 @ 0900 Hours

W2MMD Clubhouse

Forum Topic : Introduction To Smith Charts

By Professor Chris Prioli, AD2CS

Q & A Session About All Things Ham Radio and Socializing!

The HF Station Will Be Available For Local Operation!

Tech Saturday sessions are held at the W2MMD Clubhouse on the first Saturday of the month following the Wednesday Night General Membership Meeting and are designed to be hands-on collaborative events focused on using the Clubhouse resources to demonstrate various aspects of Amateur Radio and related technical areas. Previous sessions have covered USB software-defined radios, Raspberry Pi and Arduino devices, satellite operations and other similar topics.

We would like to invite all of our new members as well as our veteran members to our Tech Saturday Forums to help answer any questions and discuss any and all issues the new members have come across as they progress through the ***Amateur Radio Experience*****.**

The Discussion Theme is a QSO starting point - a way to initiate a conversation. All Tech Saturdays are an open QSO of all subjects of Amateur Radio interest. All questions are welcome as well as a venue for hams to show off their latest ham radio projects or gadgets. Have a problem programming that HT, we can help! Not sure what radio or antenna to buy, we can help!

All Club Members who would like Clubhouse access to use its radio equipment would have to have some brief “Elmering” on the Clubhouse rules, such as using the alarm system, the A/C and heaters, the antenna system, and the radio equipment. The Club’s HF station is reserved for local use on Tech Saturday.

All are welcome - Hams and Non-Hams - Club Members and Non-Club Members.

Need a ride to a Club meeting, event, or activity?

Just send a message to the Club’s e-mail reflector asking if a member can pick you up

GCARC <*at*> MAILMAN <*dot*> QTH <*dot*> NET

All Club members have access to this FREE e-mail service

GCARC Monthly VE Exam Testing Summary - July 11, 2024

Gary Reed, N2QEE, Reports : The GCARC monthly VE session was held on July 11, 2024.

There were five candidates in attendance. All candidates achieved upgrades or new licenses. They were as follows :

- **Christopher Angelastro, KE2DST, New Technician Class of Cherry Hill**
- **Robert Repetto, KE2DSX, New Technician Class of Blackwood**
- **Michael Angelastro, KE2DPQ, Upgrade to General Class of Cherry Hill**
- **Daniel Caguiat, KE2DPR, Upgrade to Amateur Extra Class of Sicklerville**
- **Kerri Caguiat, KE2DKD, Upgrade to Amateur Extra Class of Sicklerville**

The upgrades were posted on Friday afternoon and KE2DST license was issued on Saturday but KE2DSX was not issued till Tuesday morning. Both of the fees were paid on Friday afternoon but the lateness of KE2DSX call sign has no explanation.

The participating VE's were :

- **Rich W2RHS**
- **Mike N2WOQ**
- **Lee N2LAM**
- **Earl KC2NCH**
- **Mike KG4JYA**
- **Chris AD2CS**
- **Len W2LJR**
- **Court KD2SPJ**
- **Gary N2QEE**

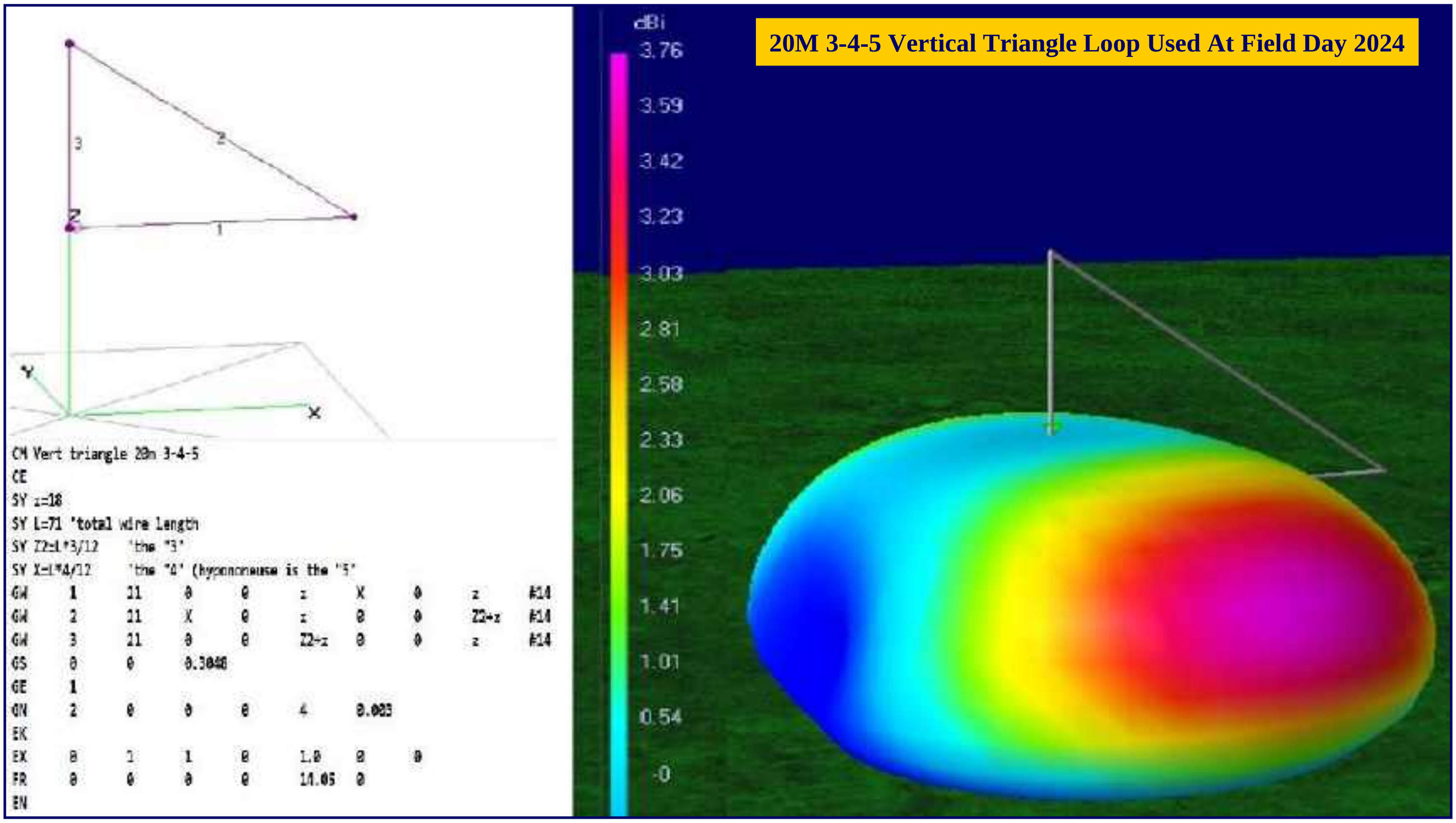
Thank you to the participating VE's. The next session will be August 8, 2024 at the W2MMD Clubhouse at 7 PM.

Packed Clubhouse for the July 8, 2024 Advanced SMT Soldering Class

This Year’s 20M Field Day Antenna

By Jim Wright, N2GXJ

Field day is and can be many different things to different people. Among the things that field day can be for me is a chance to play with home brew wire antennas that I might not otherwise had an occasion to try. Such was the case this year. In the past I’d set up a radio as part of our group field day efforts to operate digital with an antenna that allowed the radio to switch between multiple bands. The downside of a multi-band antenna use at a multi-radio field day site is that digital reception did get impacted by a nearby CW station, even when not on the same band as that station. So for this year, I decided early that I’d be operating on just one band, 20M, instead of on multiple bands like I normally do at home. For better adjacent band rejection, this would allow me to try a mono-band 20M antenna, in conjunction with a band-pass filter tuned to pass that just that band to the radio. So that is what I tried. And it worked quite well. For the first time ever, a digital station was competitive with the CW stations we had on site. Might you want to try something like this in your future? Here’s some details, in case you ever do.



20M 3-4-5 Vertical Triangle Loop Used At Field Day 2024

```
CM Vert triangle 20m 3-4-5
CE
SY z=18
SY L=71 'total wire Length
SY Z2=L*3/12    'the "3"
SY X=L*4/12     'the "4" (hypononeuse is the "5"
GW    1    11    0    0    z    X    0    z    #14
GW    2    11    X    0    z    0    0    Z2+z #14
GW    3    11    0    0    Z2+z 0    0    z    #14
GS    0    0     0.3048
GE    1
GN    2    0     0    0    4    0.003
EK
EX    0    1     1    0    1.0  0    0
FR    0    0     0    0    14.05 0
EN
```

Configured as illustrated in the picture, the antenna wire was a super-simple single continuous loop of 74 feet of THHN #14 insulated stranded copper wire, long enough to give good SWR with a 4:1 balun at the low end of the 20M band where digital signals are found. The loop was roughly configured into the shape of an upright right triangle, with sides having a 3-4-5 length ratio, with the balun positioned at the bottom corner with the 90 degree angle. The vertical side was the 3 (~18 feet), the horizontal was the 4 (~24 feet), and the sloping long side was the 5 (the remainder, ~32 feet). Mechanically, a single support rope was shot up over a tall tree, then sloped down at an angle with the long side of the antenna wire attached to it. One more piece of rope was attached to the balun and then pulled and tied off at ground level to stretch the vertical and horizontal legs of the antenna out to create the 90 degree angle in the balun corner, resulting it what looked like a floating right triangle overhead suspended by a sloping roping along the triangle’s hypotenuse.

20M Field Day Antenna - Continued on page 11

20M Field Day Antenna - Continued from page 10

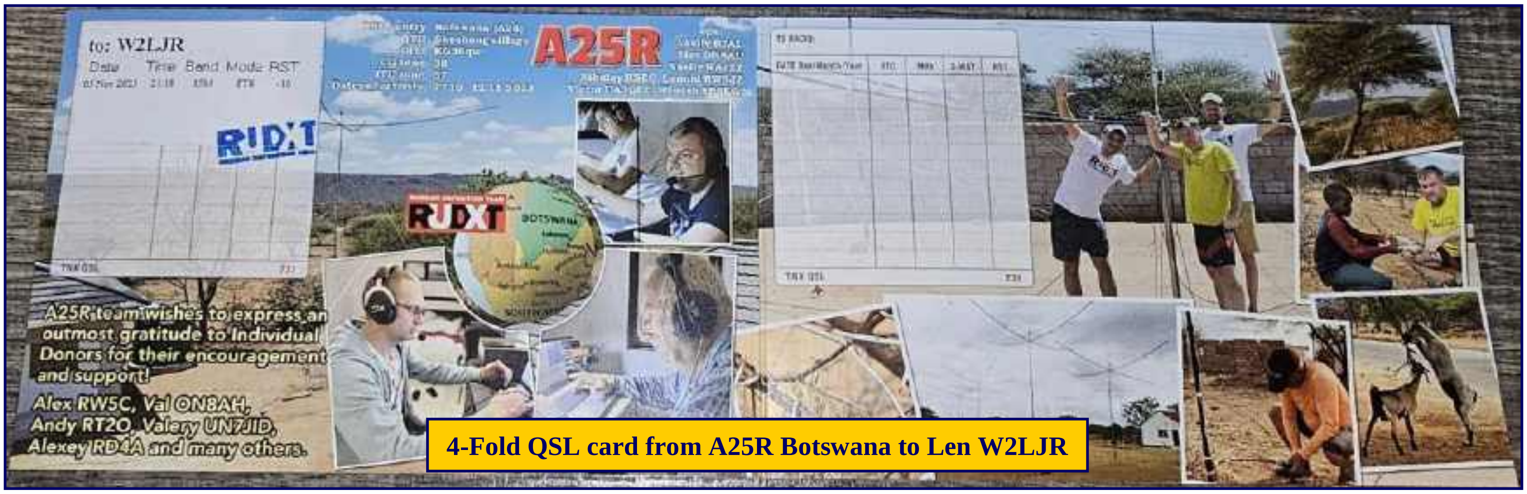
Why shaped like this? Modeling with 4nec2 showed this would be a good mono-band configuration, with broadside gain over dipole, plus some signal going off the sloping side. That's good for here on the East Coast, where by pointing the sloping side towards the NNW, you would get a desirable pattern of signal spread up and down the East Coast, and out into Alabama and up into Ohio and the Midwest. This worked out quite well, with the added bonus of contacts stretching out all the way out to California and the West Coast later in the day.

To complete the picture, with an approximately 200 ohm impedance with these wire dimensions and feed point location, the 4:1 balun made for a reasonable field-day friendly match to the 50 ohm coax we used. Down at the radio end of the coax, a 20M band-pass filter was attached between the coax and the radio. A built-in tuner in the radio took care of the rest.

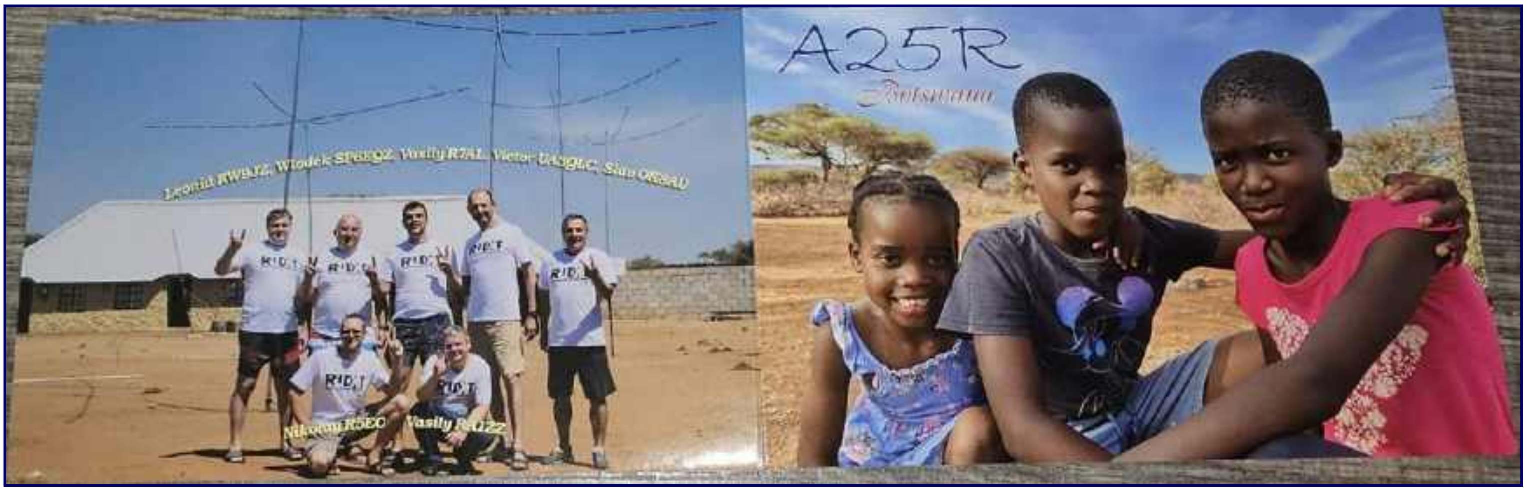
That's it! Feel free to copy and tweak for your own purposes if you ever want to give this design a try.

Good luck!

Monday & Thursday Night 40 Meter Net @ 1930 Hours
7.230 MHz (+ / - 5 or 10 kHz)
NCS : Jim Clark, KA2OSV


to: W2LJR
Date Time Band Mode RST
A25R
RDXT
BOTSWANA
TNX QSL
A25R team wishes to express an outmost gratitude to Individual Donors for their encouragement and support!
Alex RW5C, Val ON8AH, Andy RT2O, Valery UN7JID, Alexey RD4A and many others.

4-Fold QSL card from A25R Botswana to Len W2LJR



DAs and DITs

>> Congratulations to the following Club Members :

- **Diane Amico, W2WHD** (ex. KE2DPT) **:** New vanity callsign
- **Michael Angelastro, KE2DPQ :** Upgrade to General Class
- **Dan Caguiat, KE2DPR :** Upgrade to Amateur Extra Class
- **Kerri Caguiat, KE2DKD :** Upgrade to Amateur Extra Class

>> **Jon Pearce, WB2MNF**, reports on a fascinating article about the ***"The rich history of ham radio culture"*** : **https://www.popsci.com/technology/ham-radio-culture-history**

>> Condolences to **Harry Bryant, AA2WN** and family with the loss of his mother.

>> Get well to **Gary Kinney, KC2ULS**, recovering from his recent surgery.

>> Condolences to **Anthony Cerami, N2OAC** and family with the loss of his mother.

>> **Bob Saunders, KC2UYS** and **John Zaruba Jr, K2ZA**, report on some good 3D Printer safety information from the **CDC** : **https://blogs.cdc.gov/niosh-science-blog/2024/07/29/safe-3d-printing**

>> **Jon Pearce, WB2MNF**, reports : **Airspy** has released a free PDF download : **https://airspy.com/downloads/SDRsharp_Big_Book_2024.pdf** of their 250-page book on their SDR Sharp program for the Airspy and other SDR receivers. This works with the very inexpensive RTL-SDR dongle, available from Amazon at : **https://bit.ly/3WmRnBX**

2024 EME Conference in Ewing, NJ : August 9 - 11, 2024

www.eme2024trenton.org

The College Of New Jersey (TCNJ)
2000 Pennington Road
Ewing, NJ

Join over 130 fellow EMErs who have already registered, offering numerous technical sessions, and live demos. The Banquet with Joe Taylor speaking about Gravitational waves, the EME 101 beginners course plus an EME Flea market. They will be also offering a separate full one-day (Friday) Intro to EME (EME101) course. Visit the **EME101 page (https://eme2024trenton.org/eme101)** for more information.

There will be 3 local tours :

- Thursday to Thomas Edison National Historic Park
- Friday to the Grounds for Sculpture
- Saturday to a Super Outlet Shopping Extravaganza

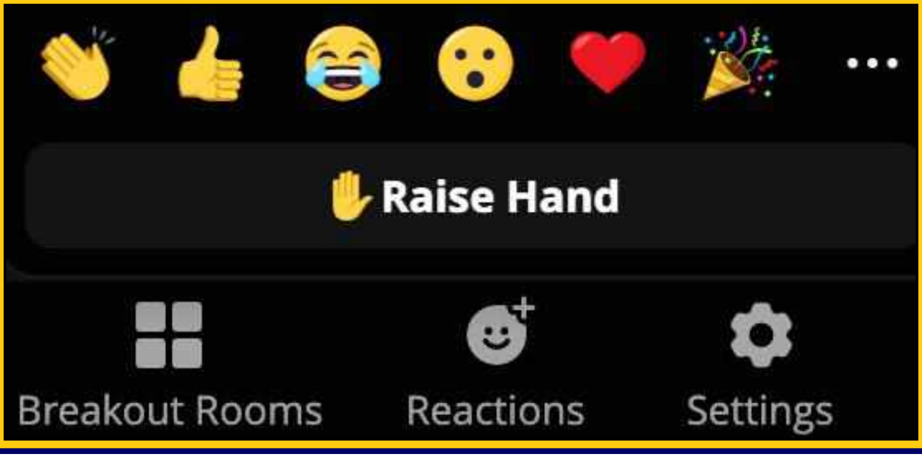
If you ever dreamed of EME or are a seasoned moon bouncer this is the place to be.

ZOOM Protocols For GCARC Meetings

To provide for a more pleasant and efficient ZOOM experience for our Club members, several protocols have been established for use at these meetings.

- **All participants will be MUTED by the administrator.**
- **If you wish to comment, please use the ZOOM "Raise Hand" feature. (See Below)**
    - **In the meeting controls, click "Reactions", then click "Raise Hand".**
    - **Users can also raise or lower their hand with the Alt+Y (Windows) or Option+Y (macOS) keyboard shortcuts.**
- **The administrator will then un-mute you so you can join the conversation. You will not be able to un-mute yourself.**
- **If you are going to use your camera, please be attired as you would be if physically coming to the meeting. Otherwise, please turn off your video.**

Thanks for following these points to help our meetings run smoothly.



ADIF Logs Wanted When Operating As W2MMD @ The Clubhouse

By Jim Wright, N2GXJ - jim.n2gxj@gmail.com

It is a common courtesy in ham radio to be able to QSL 2-way contacts made with other hams. We're pretty good about doing this for our field day contacts made each year, but are falling behind in this for contacts we make from the Clubhouse as W2MMD.

So here is the ask :

If you operate from the Clubhouse as W2MMD (e.g. on HF, UHF/VHF, or on Satellite, at Tech Saturday, or during contests or other), please email me the electronic log entries in ADIF format from the logger program you used for those contacts?

That way, just like I do following field day each year, I can get them uploaded to LOTW and to eQSL to offer the courtesy of an electronic QSL to those who make contact with us as W2MMD here in NJ.

Thank you

Regional (Atlantic & Hudson Divisions) Hamfests & Events

August 3, 2024 : Reading Radio Club, Reading Radio Club Hamfest, Heritage Park, 992 Clematis Street, Sinking Spring, PA. **www.qsl.net/w3bn**

August 3, 2024 : Tompkins County Amateur Radio Association, TCARA Hamfest, Trumansburg Fairgrounds, 2150 Trumansburg Road, Trumansburg, NY. **www.tcara-ny.org**

August 9, 2024 : 2024 EME Conference, Sponsor : Delaware Valley Radio Association; Mt. Airy VHF Club; IEEE Princeton Section; TCNJ Amateur Radio Club, The College of New Jersey, Brower Student Center, 2000 Pennington Road, Ewing, NJ. **www.eme2024trenton.org**

August 10, 2024 : Southern Adirondack Hamfest, Sacandaga Park & River Walk, 2834 New York 30, Speculator, NY. **www.adkhamfest.org**

August 10, 2024 : Uniontown Amateur Radio Club, W3PIE 74th Gabfest, 433 Old Pittsburgh Road, Uniontown, PA. **www.w3pie.org**

August 11, 2024 : Mid-Atlantic Amateur Radio Club, Valley Forge Hamfest, Kimberton Fire Company Fairgrounds, 762 Pike Springs Road, Phoenixville, PA. **www.marc-radio.org**

August 17, 2024 : Keuka Lake Amateur Radio Association, 16th Annual Keuka Lake Amateur Radio Association Hamfest, Howard Community Center, 7481 Hopkins Road, Avoca, NY. **www.klara.us**

August 24, 2024 : ROC City Net, ROC City Net Hamfest, Log Cabin Restaurant/Grounds, 2445 West Walworth Road, Macedon, NY. **www.roccityhamfest.com**

August 25, 2024 : Skyview Radio Society, Skyview Swap N Shop, Skyview Radio Society Clubhouse, 2335 Turkey Ridge Road, New Kensington, PA. **www.skyviewradio.net**

San Max Special Event : Aug 1-Aug 31, 0000Z-2359Z, 4A2MAX, Diamond, MEXICO. San Max XE Operators. 7.220, 14.180, 21.275, 28.440. Certificate & QSL. 4A2MAX San Max Special Event, 5914 San Bernardo Ave, Suite 4-135, Laredo, TX 78041-2506. This is an annual event that radio amateurs in Mexico use for the patron saint celebrations of Saint Maximilian Maria Kolbe, patron saint of radio amateurs.

https://www.qrz.com/db/4A2MAX

Maximilian Kolbe, SP3RN
Patron Saint of Amateur Radio Operators

Saint Maximilian Maria Kolbe
(January 8, 1894 - August 14, 1941) was a Polish Conventual Franciscan friar who volunteered to die in place of a stranger in the German death camp of Auschwitz, located in German-occupied Poland during World War II. He was active in promoting the veneration of the Immaculate Virgin Mary, founding and supervising the monastery of Niepokalanów near Warsaw, ***operating an amateur radio station (SP3RN)***, and founding or running several other organizations and publications. Kolbe was canonized on October 10, 1982 by Pope John Paul II, and declared a Martyr of charity. He is the ***patron saint of amateur radio operators***, drug addicts, political prisoners, families, journalists, prisoners, and the pro-life movement. John Paul II declared him "The Patron Saint of Our Difficult Century".

The First Balloon Flight!

By Jon Pearce, WB2MNF

The Balloon Team : Mike KG4JYA; Len W2LJR; Angela KE2DRJ; Doug KD2VQA; Jon WB2MNF

We finally flew our first **BCAR (Balloon Carrying Amateur Radio)!** Here's how that happened.

Background

As most readers know, we were approached several months ago to develop a **STEM** (Science, Technology, Engineering, Mathematics) program for the **Woodruff Middle School** in **Cumberland County**. After discussions with the staff we proposed a project involving launching high-altitude balloons carrying Amateur Radio as a core topic from which many others could be derived. Once committed to that concept, though, the Club team determined that we needed to launch one or more balloons in advance of the beginning of the school project to develop the skills and experience needed for successful launches. We acquired many of the items needed, built a team, set up an active Discord discussion group and did lots of research. Now we were ready for the first launch.

First Flight Objective

Although our overall objective is to build a balloon that will circumnavigate the earth we decided to take an incremental approach by setting more modest goals along the way that would allow us to use less costly materials. By substituting Mylar® party balloons for the more durable super-pressure balloons and using batteries instead of solar panels we saved significant cost, but also knew that there was no chance for a long duration flight. A shorter flight would still allow us to test many of the balloons and radio preparation steps, check out the telemetry and have some initial success. After some discussion we set a modest goal of declaring success if we could monitor the balloon up to an altitude of 10,000 feet.

Approach

The SBS balloons that we obtained for the actual launches are quite durable but also quite costly, so **Doug Dersch KD2VQA** picked up a few 36 inch Mylar® balloons for a few dollars that we decided to try. When completely filled with helium these balloons generated almost 150 grams of lift, so since our payload was slightly more than 50 grams we attempted to partially fill the balloon to create this much lift and no more.

Partially inflating the balloon would allow some expansion as the balloon reached thinner air, but we also tried another approach to lessen the chance of the balloon bursting as the pressure in the balloon exceeded that of the ambient air surrounding it. In the inflation port of the balloon we inserted a soda straw holding a small piece of a cotton mop found in the Clubhouse. We reasoned that this would allow some gas to escape from the balloon and thus would lessen its chance the bursting.

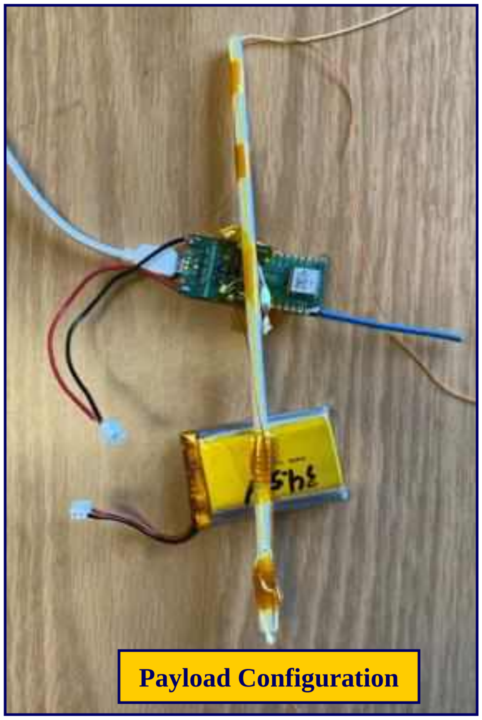
Doug KD2VQA Inflating The Mylar® Balloon

GCARC First Balloon Flight - Continued on page 16

GCARC First Balloon Flight - Continued from page 15

(In actuality that approach may have hastened its demise, as described later.)

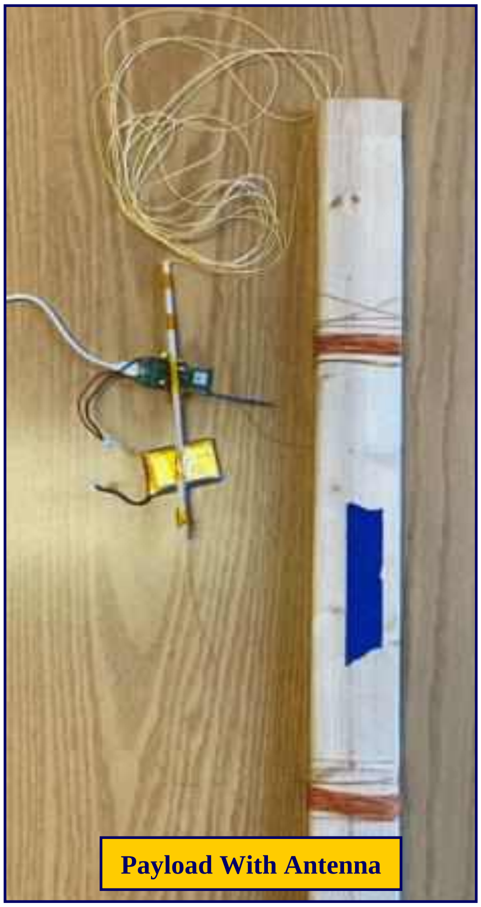
Several months ago we purchased two balloon tracking units from **ZachTek (https://www.zachtek.com)**, which were described in previous CrossTalk articles. While we still expect to use these for actual flights, we also identified a lower cost alternative that utilizes a Raspberry Pi Pico combined with an add-on board containing a GPS receiver, power converter and 20 meter transmitter that together cost about $11. **Mike Thompson KG4JYA** figured out how to configure these devices by selecting a “channel” that defines the transmit frequency, timing, and several parameters in a spoofed call sign that allow specific identification of the WSPR packets since these devices send data that doesn’t conform to the WSPR protocol.



Payload Configuration

We decided to use a battery instead of solar cells for this launch, partly to save cost and partly because we haven’t yet decided how to fasten solar cells to this radio. An additional benefit to using batteries is that they provide a constant source of power for the radio telemetry units, meaning that we would get a telemetry update every 10 minutes. Solar cells only provide power in direct sunlight, so we might miss getting telemetry in the early stages of the launch if the balloon passed through a cloud and solar cells weren’t brightly lit. We used a 2200 mAh LiPo battery to power the radio after doing some testing with that 1100 mAh battery and finding that the smaller battery would power the radio for about 24 hours. Having no idea how long this flight would last we decided to use the stronger yet heavier battery, which wound up being far larger than necessary for the three hour flight. In the future we'll use a smaller battery and save some weight.

The remaining components were the wire for the vertical 20m dipole (we used the mil-spec Teflon-coated silver wire that was donated by a Club member), some Kevlar cord for strain relief, a soda straw and some Kapton tape. We taped the transmitter and the battery to the soda straw along with the antenna wire for strain relief on the solder joints to the transmitter and ran the Kevlar cord lengthwise through the straw to connect to the balloon. The antenna was wound around a wooden 1x2 with the Kevlar cord protruding from the soda straw for safekeeping during assembly. The Kevlar cord and one end of the dipole antenna are attached to the balloon with the Kaptan tape while the other end of the dipole hangs free below the transmitter.



Payload With Antenna

Filling the balloon with the proper amount of helium is somewhat challenging. The goal is to add enough helium to lift the weight of the payload plus an additional amount based on other experimenters’ recommendations that we established at 8 grams. Since the weight of the payload (radio, battery, antenna, and other components) was 52 grams we decided to inflate the balloon to have 60 grams of lift. This is done by connecting a 100 gram weight to the bottom of the balloon, placing the weight on the gram scale, and inflating the balloon until the scale shows 40 grams. This is easier said than done.

GCARC First Balloon Flight - Continued on page 17

GCARC First Balloon Flight - Continued from page 16

The balloon needed to be filled through the soda straw which was pressed up against the inflater on the helium tank that itself needed to be bent to release the helium. This worked pretty well, but Doug inadvertently over-inflated the balloon passed the lift point that we had identified. Since we were concerned about the balloon clearing the trees at launch we decided to leave the extra helium in the balloon. After inflation we taped the top of the Kevlar cord and the antenna to the balloon with the Kapton tape and were almost ready to go.

Doug KD2VQA and his fishing pole

At that point we went outside and got ready for final testing and launch. Doug had brought a fishing pole with a long length of monofilament line that he looped over a knot in the Kevlar line, keeping one end of the monofilament on the fishing reel and holding the other end in his hand. That allowed him to play out the line and see how the balloon responded to the wind, but also to reel it back in. That approach proved very helpful in precisely launching the balloon at a point when the winds were favorable. Doug unspooled the monofilament to allow the balloon to rise enough to extend the top half of the antenna for transmitter testing while **Angela Metzger KE2DRJ** held the bottom of the payload to keep it from moving around too much in the wind.

Doug, Len, and Angela testing the Balloon

Checking The Radio

Before launching the balloon we needed to make sure the radio was transmitting properly. The radio puts out a WSPR signal on 20 meters (14.0971 MHz), so Mike tuned in that signal on the Flex radio in the HF room and verified that it was transmitting properly. In fact our WSPR transmissions, with half of the 20 meter dipole on the ground, were still picked up worldwide! Such is a testament to the robustness of WSPR.

The Launch!

At that point we were ready to go. A moderate-sized crowd of Club members and kids had gathered over by the Clubhouse to watch the launch. Unfortunately the wind had picked up slightly at that point and was swinging in different directions, so we held onto the balloon until it was favorable to the north, which was our furthest distance from the trees. At that point Doug asked the critical question ***"Clear to launch?"*** and in my best **Gene Krantz** imitation I shouted ***"Launch approved!"***. Doug released the monofilament line and the balloon soared almost vertically and slightly to the north. We watched for several minutes until it disappeared into the clouds and then headed into the Clubhouse to track the telemetry.

GCARC First Balloon Flight - Continued on page 18

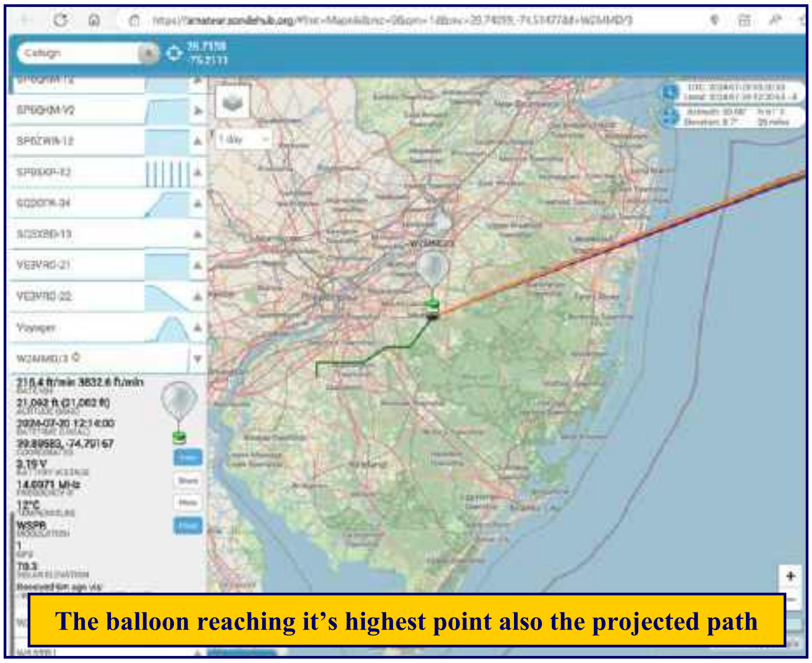
GCARC First Balloon Flight - Continued from page 17

Tracking The Balloon

Inside the Clubhouse Mike was already tracking the balloon on several websites that could show various aspects of its progress. The **WSPRnet** (**https://www.wsprnet.org/drupal/wsprnet/spots**) site shows stations that have received WSPR transmissions from the balloon transmitter, so we could tell that the transmitter was being heard by many stations hundreds of miles away. That site didn't tell us where the balloon was so we primarily use the **SondeHub** (**https://amateur.sondehub.org/#!mt=Mapnik&mz=8&qm=12h&mc=39.73465,-75.20691&f=W2MMD/3**) website, which receives data from WSPRnet and was populated by a program that Mike wrote that transferred that data to SondeHub. We also use the **Traquito** (**https://traquito.github.io/trackergui**) site that showed graphical telemetry information. WSPR updates occurred about every 10 minutes, with an initial identification packet being followed by the telemetry packet, so we waited eagerly for those 10 minute updates.

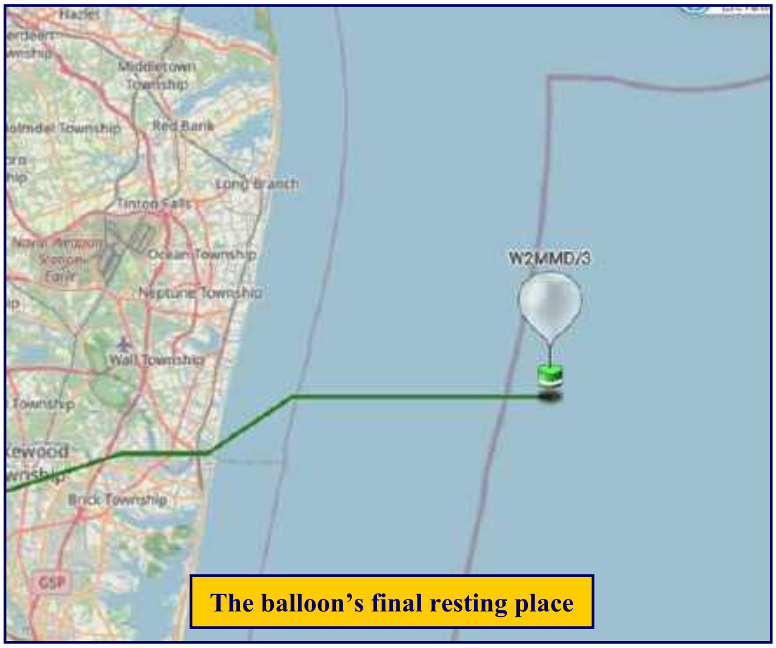
At first the balloon headed north almost directly towards Philadelphia International Airport but quickly turned northeast on a path that had followed through most of its journey. It slowly ascended reaching 10,000 feet after about 1/2 hour, meeting our first success criterion. As it rose we continue to monitor the temperature, concerned that if it dropped below freezing the battery would cease to function. Although the temperature dropped to the mid 40s it remained above freezing so battery function was never a concern.

The balloon continued to move northeast at about 45 mph and rising slowly until it reached almost 23,000 feet several miles east of Medford NJ. It then began to slowly descend at about the same rate that it had risen. Having far exceeded our initial goal of reaching 10,000 feet we recalibrated that goal to hope that the balloon would reach international waters before finally hitting the ocean, which we were pleased to see occurring on the balloon's final transmission.



The balloon reaching it's highest point also the projected path

Anxious "Parents" tracking their "new born" balloon



The balloon's final resting place

GCARC First Balloon Flight - Continued on page 19

GCARC First Balloon Flight - Continued from page 18

Club members gathering to watch this historical event

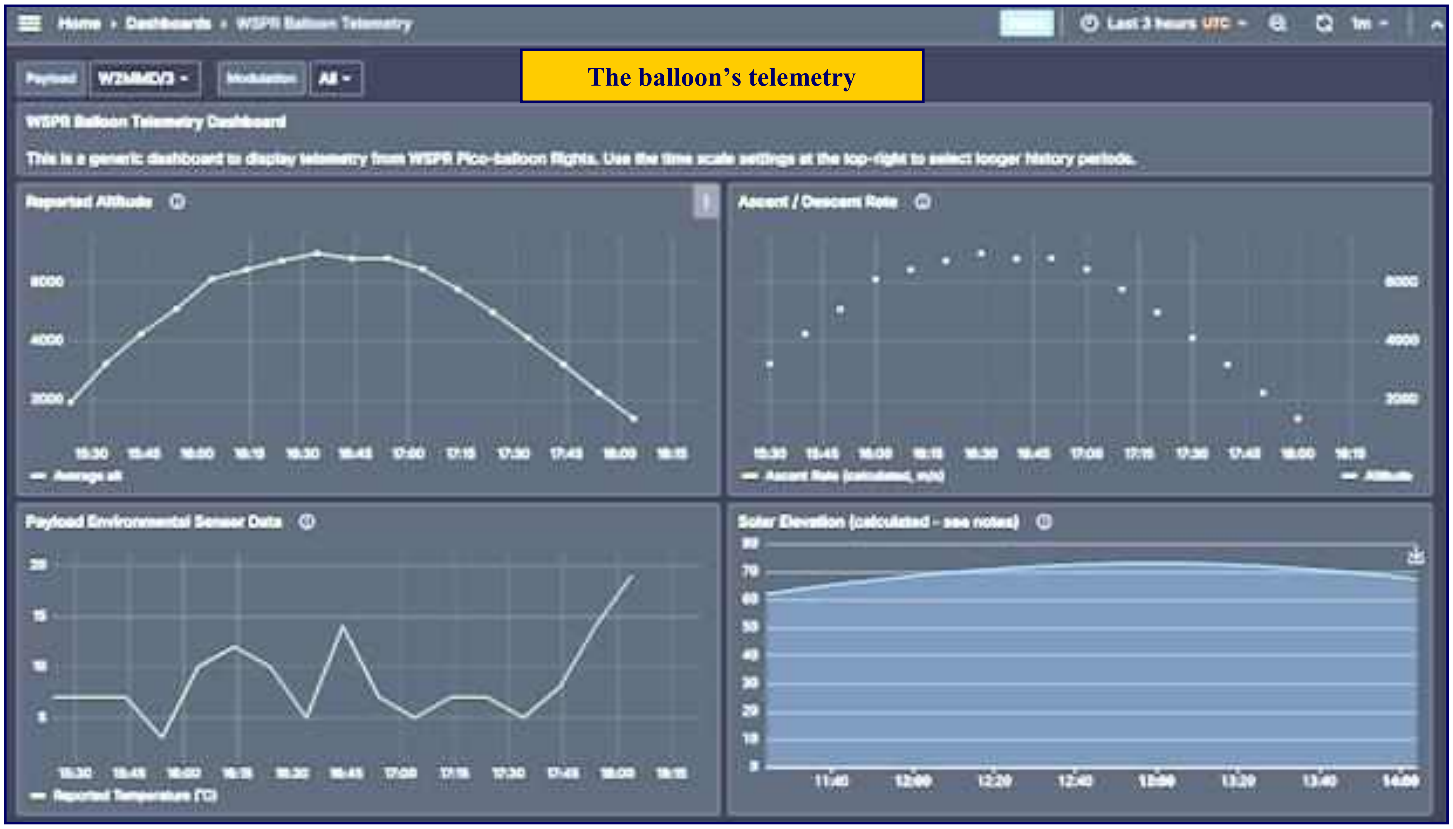
When about 7 minutes passed with no WSPR updates we declared the mission over, but also successful. The intrepid Clubhouse team that had been hanging around for about 3 hours finally relaxed.

What Happened To The Balloon?

If we were SpaceX we would have had multiple sources of telemetry they could have identified the exact causes of the ultimate failure of the balloon. In particular, knowing the internal pressure of the balloon would tell us why it had descended, but here's our best guess. Since the balloon was vented at the bottom with the soda straw to allow pressure to escape and avoid bursting we're guessing that too much gas escaped at 22,000 feet. Without sufficient gas to continue to maintain altitude the balloon slowly descended over about 1/2 hour period. We don't believe that the balloon burst because the descent would have been faster. And noting that we had initially over inflated the balloon the excess internal pressure of the balloon occurred at a lower altitude than if we had properly inflated it.

What's Next?

If we're correct in our assumptions there's another logical test to try, which is sealing the bottom of the balloon and seeing how high it will go before it bursts. We're going to try that sometime over the week of July 29th and may have some additional information at that point. Regardless of that outcome we plan to launch the SBS balloon on August 3rd and with the goal of achieving a successful circumnavigation of the earth.



The balloon's telemetry

WSPR Balloon Telemetry Dashboard

This is a generic dashboard to display telemetry from WSPR Pico-balloon flights. Use the time scale settings at the top-right to select longer history periods.

The Education Connection

By Chris Prioli, AD2CS - chris@ad2cs.com
www.ad2cs.com

August 2024

The summer doldrums are upon us, and with that slack period comes a much-needed (even if it is not deserved) break for me. Of course, September will be on us soon, as time continues its inexorable march forward, never slowing and never reversing its course.

September brings the advent of Session VIII, the Fall 2024 session, of the GCARC Ham Exam Preparation Classes. The schedule is set to run as follows :

Level	Element	Held On	First Meeting	Exam Date
Technician Class	**2**	**Mondays**	**9 September**	**18 November**
General Class	**3**	**Tuesdays**	**10 September**	**19 November**
Amateur Extra Class	**4**	**Fridays**	**13 September**	**22 November**

Registration is now open, and the classes are posted on the ARRL website. I already have some enrollees for this session, so we are off to a good start. Hopefully, some of the Session VII students will enroll for license upgrade training.

The **August 10, 2024 Tech Saturday Forum** topic, as will undoubtedly be announced elsewhere in this weighty publication, will deal with a light look at VNA's, Smith Charts, inductance, capacitance, and the correction of antenna system mismatch conditions from a visual and hands-on viewpoint.

I have constructed a device that employs the working parts of an MFJ antenna tuner in such a manner that we can connect the capacitors and inductor in various forms of series and/or parallel matching circuits. We can then observe the effects of changing these values directly on the screen of a large-scale bench-type vector network analyzer (VNA)… or on our familiar NanoVNA's.

Come on out and have some fun while learning a bit about how it all works. We will try to peek through all of the smoke and mirrors and see how the magic happens.

The doldrums also means that this is a shortened column this time around, so that's all for this edition…

See You Next Month

W2MMD

www.facebook.com/W2MMD

twitter.com/w2mmd_gcarc

Facebook

Tuesday AfterNoon Net @ 1200 Hours

Net Control Stations :
Steve Farney, W2SEF; Chris Prioli, AD2CS; Rich Subers, W2RHS, Greg Ciraula, W5DO; & Jeff Garth, WB2ZBN

147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

Here is the schedule for the upcoming weeks

Greg Ciraula, W5DO : August 6, 2024
Chris Prioli, AD2CS : August 13, 2024
Rich Subers, W2RHS : August 20, 2024
Steve Farney, W2SEF : August 27, 2024

Steve Farney, W2SEF : September 3, 2024
Chris Prioli, AD2CS : September 10, 2024
Greg Ciraula, W5DO : September 17, 2024
Rich Subers, W2RHS : September 24, 2024

Greg Ciraula, W5DO : October 1, 2024
Chris Prioli, AD2CS : October 8, 2024
Steve Farney, W2SEF : October 15, 2024
Rich Subers, W2RHS : October 22, 2024
Jeff Garth, WB2ZBN : October 29, 2024

Greg Ciraula, W5DO : November 5, 2024
Chris Prioli, AD2CS : November 12, 2024
Steve Farney, W2SEF : November 19, 2024
Jeff Garth, WB2ZBN : November 26, 2024

Greg Ciraula, W5DO : December 3, 2024
Chris Prioli, AD2CS : December 10, 2024
Rich Subers, W2RHS : December 17, 2024
Christmas Eve : December 24, 2024
New Year's Eve : December 31, 2024

If you would like to be a Net Control Station for this net, please contact Steve Farney, W2SEF

Thursday Night Rag Chew Net @ 2000 Hours

Net Control Stations :
Chris Prioli, AD2CS; Mary Delemarre, W2TDS; Gary Mirkin, WA3SVW; Steve Farney, W2SEF; & Jeff Garth, WB2ZBN

147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

Here is the schedule for the upcoming weeks :

Chris Prioli, AD2CS : August 1, 2024
Mary Delemarre, W2TDS : August 8, 2024
Gary Mirkin, WA3SVW : August 15, 2024
Steve Farney, W2SEF : August 22, 2024
Jeff Garth, WB2ZBN : August 29, 2024

Chris Prioli, AD2CS : September 5, 2024
Mary Delemarre, W2TDS : September 12, 2024
Gary Mirkin, WA3SVW : September 19, 2024
Steve Farney, W2SEF : September 26, 2024

If you would like to be a Net Control Station for this net, please contact Jeff Garth, WB2ZBN

Gloucester County Skywarn Net

The Gloucester County Skywarn Net is held every Sunday @ 1930 Hours on the 147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

All Are Welcome To Participate

Net Control Stations : Steve Bromhead KB2RTZ, Bob Keogh KD2NEC, Charlie Wahl, KC2STO, & Jeff Garth WB2ZBN

Gloucester County ARES Net

The Gloucester County ARES Net is held every Sunday @ 2000 Hours on the 147.180 MHz (+) (131.8) Repeater & EchoLink W2MMD-R

All are welcome to participate

Net Control Stations : Steve Farney W2SEF, Greg Ciraula W5DO, Bob Keogh KD2NEC, Karl Frank W2KBF, Al Arrison KB2AYU, Gary Mirkin WA3SVW, & Todd Woodward KD2ESH

Gary Mirkin WA3SVW : August 4, 2024
Todd Woodward KD2ESH : August 11, 2024
Bob Keogh KD2NEC : August 18, 2024
Steve Farney W2SEF : August 25, 2024

Anyone who is interested in joining the Gloucester County ARES Team, is invited to contact Bob Keogh at KD2NEC @ QSL.NET

"Dinner @ The W2MMD Clubhouse"

Wednesday, August 28, 2024 @ 1800 Hours
W2MMD Clubhouse

ARRL Learning Center

https://learn.arrl.org

Discover how to make Amateur Radio your own.

Online courses from the ARRL Learning Center provide ARRL members with additional instruction and training for getting on the air, emergency communications, and electronics and technology

Current Website Updates : Go to this page to find out the latest changes & updates on our W2MMD Website
https://gloucestercountyarc.weebly.com/current-website-updates.html

At The Repair Bench…

A monthly column describing a recent repair bench event.

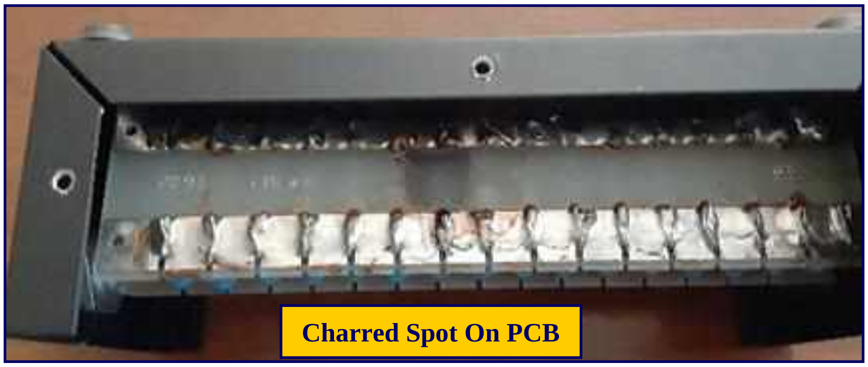
By Chris Prioli, AD2CS - chris@ad2cs.com - www.ad2cs.com

Para Dynamics PDC-50DL Dummy Load - August 2024

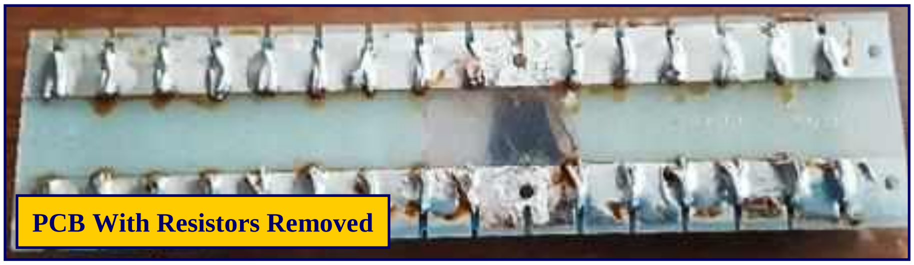
It never ceases to amaze me that people will spend good money to repair equipment that is less expensive to replace than it is to repair. That was the case with the **Para Dynamics PDC-50DL** fifty-ohm one-hundred-watt dummy load that showed up at my door.

The complaint was that the owner smelled a “burnt electronics” odor from the dummy load, and when he measured the through-resistance of the load, it was no longer 50.1 ohms as it had been. Instead, it was closer to 54 ohms, and he wanted the unit repaired.

When I put it on the bench, the first thing that I did was to measure the through-resistance of the load, which came in at 53.8 ohms. Now this is clearly ***not*** fifty ohms as the load was labeled, but it was not terribly far from it. I decided to open it up and see what was what inside the unit.



Charred Spot On PCB



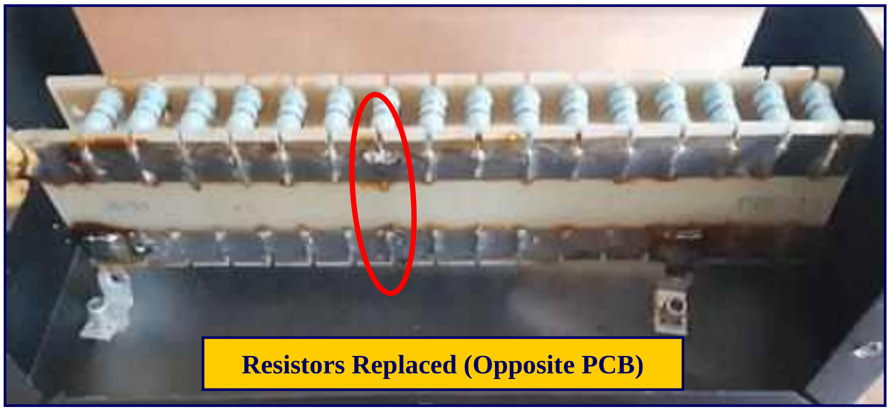
PCB With Resistors Removed

Upon removal of the cover, I discovered that the architecture of the unit was a set of forty-eight 270-ohm 2W resistors configured as sixteen parallel sets of three resistors each, with each group of three resistors set up as individual series strings. Thus, we had 16 parallel resistances of 810 ohms each. Some simple mathematics shows that the total resistance would be 50.625 ohms (810 divided by 16). However, the resistors were 5% types, meaning that each series string could have been anywhere from 769.5 ohms to 850.5 ohms. Taken at the high end, and assuming all were the same, we would now have 850.5 divided by 16, or a potential high resistance of 53.15625 ohms. I wondered just what his concern was until I looked at the other side of the PCB sandwich that comprised the body of the dummy load. There, it was obvious that a resistor had gotten very hot, as the board was charred.

At The Repair Bench - Continued on page 24

At The Repair Bench - Continued from page 23

I attacked the unit with the soldering iron, first removing the dummy load body from its enclosure, and then removing the three resistors in the series string that was centered at the charred spot. What I found was that ***all three of these resistors had failed catastrophically***, and that that particular series string was in fact not in circuit at all, but was fully open.



Resistors Replaced (Opposite PCB)

I had the same type and value resistors in stock, so it was a simple job to install three new resistors at that location in the array. I did so, and then I reassembled the dummy load. Now when measured with the ohmmeter, the resistance showed as 50.1 ohms from the SO-239 center pin to the body of the dummy load.

So… why did these three resistors fail, and why did they fail in the manner in which they did? I cannot answer that with any degree of certainty. I can make the assumption, however, that excessive power was input into the load and that this failure was the result. Maybe they were the "weak link" in the resistor chain. Maybe the soldering at those resistors was poor and heat developed as a result. ***"Maybe"*** is a big and powerful word, because it can mean so much and so little at the same time. All that I know for sure is that the dummy load is now back to its nominal fifty-ohm value, though in reality it was never very far off from that value, and was just barely outside of the tolerance range for the components used in its construction. Finally, I would like to mention that the 100-watt rating is a bit hopeful, as on its best day, two watts each at forty-eight resistors only provides for sinking 96 watts. What a slippery slope.

See you next month.

Great turn-out for the *"You've Got Your License, Now What"* session @ the W2MMD Clubhouse on July 15, 2024

Club Member	DMR ID
W2MMD Clubhouse	**3198604**
Michael Andrescavage, N2ICV	3134044
Lance Appel, KE2UC	3200487
Alex Calabrese, WA2ADS	3100583
Chuck Capasso, WB2PGE	3169781
Matthew Carango, N3QB	3169432
Todd Cecilio, KA2YNT	3169458
Anthony Cerami, N2OAC	3202759
Mark Clark, N3QMJ	3102110
Holden Correia-Fisher, KD2JPV	3104911
Mike Covaleski, N2MMC	3134855
Walter Coward, WX2E	3166863
Bob Demola, KD2GFL	3134319
Doug Dersch, KD2VQA	3193630
Thomas Distelcamp Sr, KC2GYC	3110869
Glenn Dougherty, N2YIO	3161836
Adam Duncan, W3DUN	3202691
Herb Dyer, KT2Y	3134907
Harry Elwell, AD5TT	3128498
James Foster, W3JNF	3142117
Karl Frank, W2KBF	3146716
Glen Guenther, KE2BUO	3202079

Club Member	DMR ID
Melissa Guenther, KE2BWZ	3202496
Deirdre Anne Hebert, AD2GQ (AB1ST)	3133330
Gary Mirkin, WA3SVW	3165494
John Murrow, KD2NHK	1134122
Phil Nunzio, WA3RGY	3134336
John O'Connell, K2QA	3110610
Robert Pantazes, W2ARP	3157208
Jon Pearce, WB2MNF	3163415
Mike Pecorini, K2MRP	3132996
Michael Pentimall, KC3VTF	3203601
John Price III, KD2QYC	3123583
Chris Prioli, AD2CS	3195449
Len Rust III, W2LJR	3186225
Len Rust IV, K2LJR	3196243
Dave Sheppard, W2PAX	3112666
Cory Sickles, WA3UVV	1142052
James Simeone, KC2AOF	3134848
Court Smith, KD2SPJ	3186243
Jackson Snyder, AI2D	3164371
Rich Subers, W2RHS	3204316
Brett Waller, K2BKW (KC2UXQ)	3134261
Bill Wood, KD2OSJ	3197459
John Zaruba Jr, K2ZA	3134331

For more information, DMR links, and W2LJR's DMR presentations, go to :
https://gloucestercountyarc.weebly.com/dmr.html

CrossTalk Submissions

This is your Club Magazine. Make use of it.

If you have stories or photos of your hobby that you would like to share with the Club, please do so!

We will keep covering all of the GCARC events, but it is also nice to get those personal perspectives to include in every issue. Connecting through experiences is what makes the Gloucester County Amateur Radio Club a *REAL* Club.

All submissions, queries, comments, and editorials should be addressed to :
Jeff Garth, WB2ZBN at djgrath1 <*at*> gmail <*dot*> com

Submission deadline for the September 2024 issue : Tuesday, August 20, 2024

Club Website www.w2mmd.org
Club E-Mail Reflector : GCARC <*at*> Mailman <*dot*> QTH <*dot*> Net

DMR Configuration Sequence

1. **Obtain and Configure DMR ID :**
    - **https://www.radioid.net**
2. **Download Contact List :**
    - **http://www.dmrcontacts.com**
3. **Identify Repeater or Hotspot :**
    - **https://www.repeaterbook.com**
4. **Define Talk Groups**
    - **Numerical ID**
    - **Text Name**

https://brandmeister.network/?page=talkgroups

5. **Create Channel**
    - **Select Number**
    - **Assign Name**
    - **Select DMR ID**
    - **Assign Frequency**
        - **Transmit**
        - **Receive**
        - **Bandwidth**
        - **Power**
        - **DMR Mode (Simplex/Repeater)**
        - **TX Permit (Channel Free)**
    - **Assign Talk Group**
    - **Assign Color Code**
        - **Agreed Upon with Other Users**
    - **Assign Time Slot**
    - **Agreed Upon with Other Users**

6. **Create Zone**

7. **Add Channels to Zones**

8. **Configure Features**

9. **Upload Code Plug**

10. **Upload Contact List**

If you recently changed your callsign, contact idteam@dmr-marc.net to have your DMR ID transferred to your new callsign.

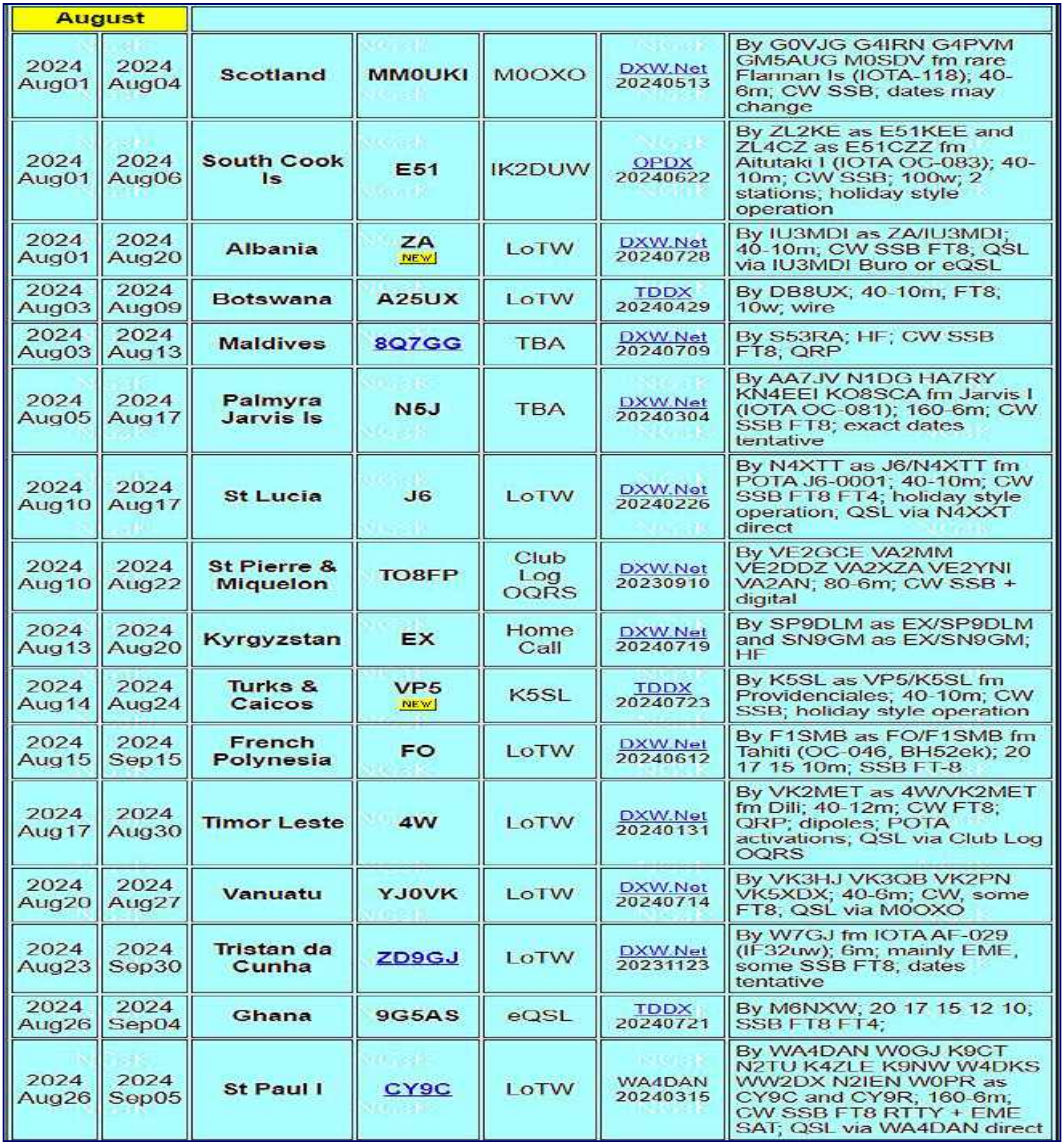
ARES Resources

Download the ARES Manual [PDF] : https://bit.ly/3iUhJLQ
ARES Field Resources Manual [PDF] : https://bit.ly/3QT4PtY
ARES Standardized Training Plan Task Book [Fillable PDF] : https://bit.ly/3wg5kVt
ARES Standardized Training Plan Task Book [Word] : https://bit.ly/3ZTNDbR
ARES Plan : https://bit.ly/3XLokXH
ARES Group Registration : http://bit.ly/3XodGpX
Emergency Communications Training : http://bit.ly/3J2gMMf
2022 National Preparedness Report : https://bit.ly/3EnvcTW
Southern New Jersey Section EOP 2022.PDF : https://bit.ly/3SbrXol

The Amateur Radio Emergency Service® (ARES) consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes. Every licensed amateur, regardless of membership in ARRL or any other local or national organization is eligible to apply for membership in ARES. Training may be required or desired to participate fully in ARES. Please inquire at the local level for specific information. Because ARES is an amateur radio program, only licensed radio amateurs are eligible for membership. The possession of emergency-powered equipment is desirable but is not a requirement for membership.

If you are interested in learning more about the Gloucester County ARES Program or becoming an ARES member, please contact Bob Keogh (KD2NEC@QSL.NET)

Announced DX Operations
www.ng3k.com/Misc/adxo.html
From The Shack of Bill Feidt, NG3K : www.ng3k.com



August						
2024 Aug01	2024 Aug04	**Scotland**	**MM0UKI**	M0OXO	DXW.Net 20240513	By G0VJG G4IRN G4PVM GM5AUG M0SDV fm rare Flannan Is (IOTA-118); 40-6m; CW SSB, dates may change
2024 Aug01	2024 Aug06	**South Cook Is**	**E51**	IK2DUW	OPDX 20240622	By ZL2KE as E51KEE and ZL4CZ as E51CZZ fm Aitutaki I (IOTA OC-083); 40-10m; CW SSB; 100w; 2 stations; holiday style operation
2024 Aug01	2024 Aug20	**Albania**	**ZA** NEW	LoTW	DXW.Net 20240728	By IU3MDI as ZA/IU3MDI; 40-10m; CW SSB FT8; QSL via IU3MDI Buro or eQSL
2024 Aug03	2024 Aug09	**Botswana**	**A25UX**	LoTW	TDDX 20240429	By DB8UX; 40-10m; FT8; 10w; wire
2024 Aug03	2024 Aug13	**Maldives**	**8Q7GG**	TBA	DXW.Net 20240709	By S53RA; HF; CW SSB FT8; QRP
2024 Aug05	2024 Aug17	**Palmyra Jarvis Is**	**N5J**	TBA	DXW.Net 20240304	By AA7JV N1DG HA7RY KN4EEI KO8SCA fm Jarvis I (IOTA OC-081); 160-6m; CW SSB FT8; exact dates tentative
2024 Aug10	2024 Aug17	**St Lucia**	**J6**	LoTW	DXW.Net 20240226	By N4XTT as J6/N4XTT fm POTA J6-0001; 40-10m; CW SSB FT8 FT4; holiday style operation; QSL via N4XXT direct
2024 Aug10	2024 Aug22	**St Pierre & Miquelon**	**TO8FP**	Club Log OQRS	DXW.Net 20230910	By VE2GCE VA2MM VE2DDZ VA2XZA VE2YNI VA2AN; 80-6m; CW SSB + digital
2024 Aug13	2024 Aug20	**Kyrgyzstan**	**EX**	Home Call	DXW.Net 20240719	By SP9DLM as EX/SP9DLM and SN9GM as EX/SN9GM; HF
2024 Aug14	2024 Aug24	**Turks & Caicos**	**VP5** NEW	K5SL	TDDX 20240723	By K5SL as VP5/K5SL fm Providenciales; 40-10m; CW SSB; holiday style operation
2024 Aug15	2024 Sep15	**French Polynesia**	**FO**	LoTW	DXW.Net 20240612	By F1SMB as FO/F1SMB fm Tahiti (OC-046, BH52ek); 20 17 15 10m; SSB FT-8
2024 Aug17	2024 Aug30	**Timor Leste**	**4W**	LoTW	DXW.Net 20240131	By VK2MET as 4W/VK2MET fm Dili; 40-12m; CW FT8; QRP; dipoles; POTA activations; QSL via Club Log OQRS
2024 Aug20	2024 Aug27	**Vanuatu**	**YJ0VK**	LoTW	DXW.Net 20240714	By VK3HJ VK3QB VK2PN VK5XDX; 40-6m; CW, some FT8; QSL via M0OXO
2024 Aug23	2024 Sep30	**Tristan da Cunha**	**ZD9GJ**	LoTW	DXW.Net 20231123	By W7GJ fm IOTA AF-029 (IF32uw); 6m; mainly EME, some SSB FT8, dates tentative
2024 Aug26	2024 Sep04	**Ghana**	**9G5AS**	eQSL	TDDX 20240721	By M6NXW; 20 17 15 12 10; SSB FT8 FT4;
2024 Aug26	2024 Sep05	**St Paul I**	**CY9C**	LoTW	WA4DAN 20240315	By WA4DAN W0GJ K9CT N2TU K4ZLE K9NW W4DKS WW2DX N2IEN W0PR as CY9C and CY9R; 160-6m; CW SSB FT8 RTTY + EME SAT; QSL via WA4DAN direct

Also for your convenience, there is a direct link to NG3K on our website. Click on the NG3K DX Page.

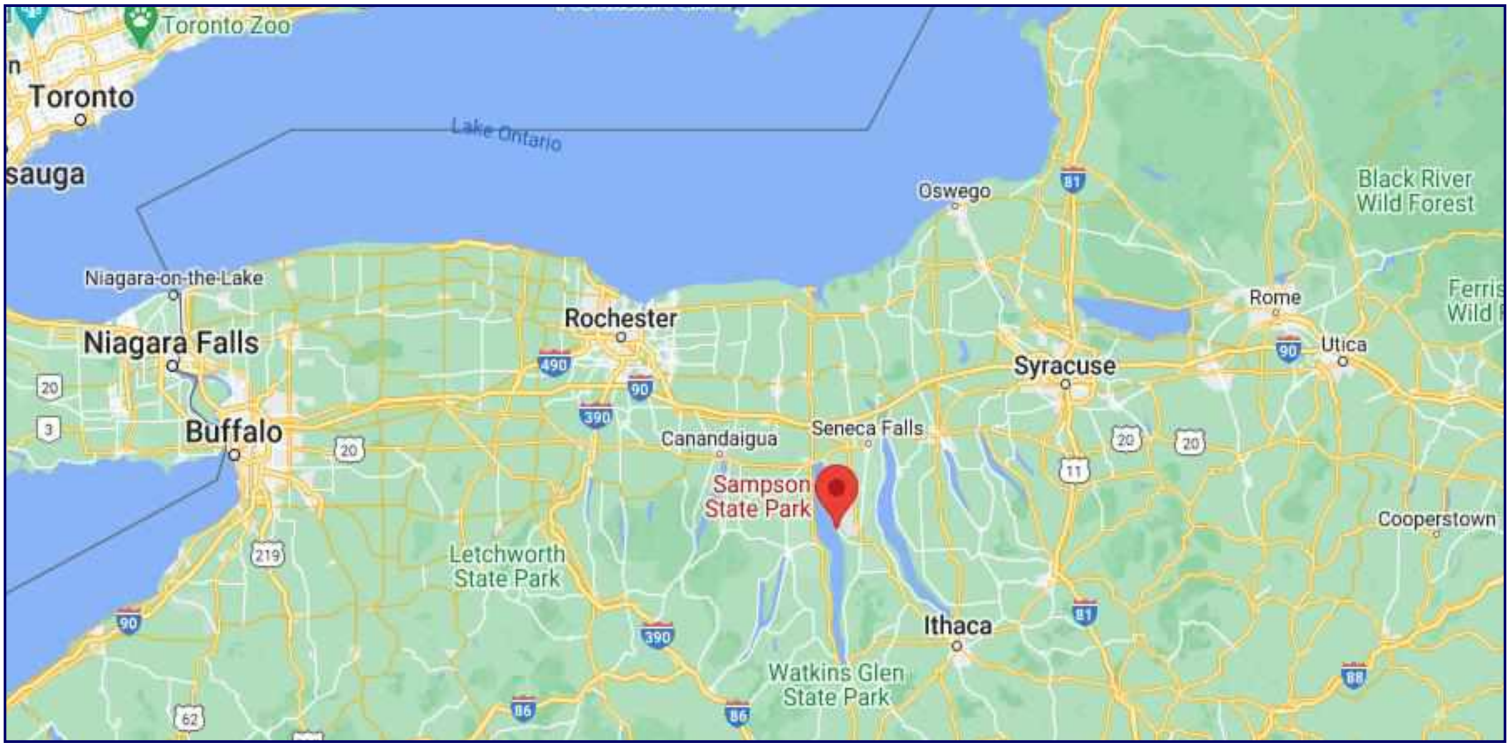
My First Parks-On-The-Air (POTA) Activation

By Stan Slachetka, WA2JRZ

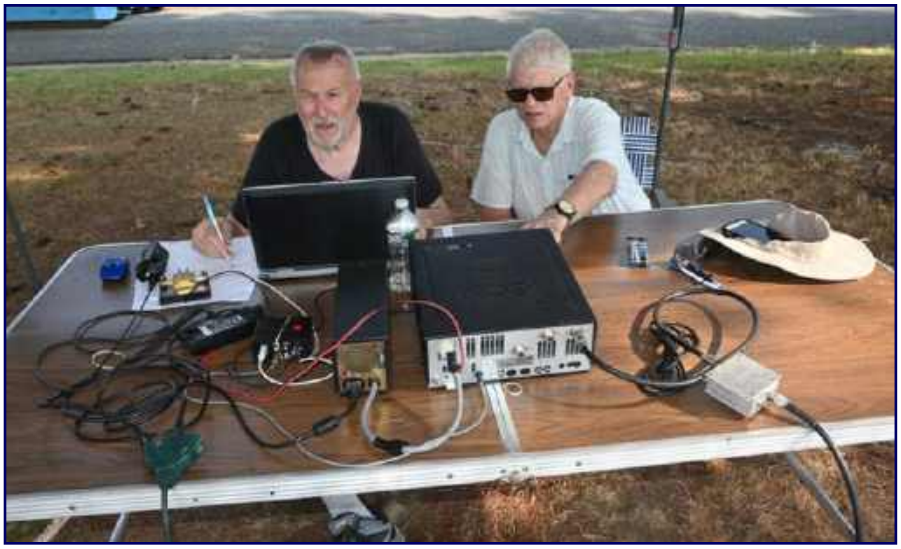
This was my first attempt at a Parks-On-The-Air (POTA) activation while on a recent vacation in upstate New York. I was attempting to activate Sampson State Park (US-2133) located on the east shore of Seneca Lake in the Finger Lakes region of New York. My gear included a Xiegu G90 transceiver running 20 watts sideband on 20 meters into a Buddipole vertical antenna. Power was provided by a 9Ah Bioenno LiFePo4 battery.

Sampson State Park consists of 2,000 acres and is the site of a former U.S. Navy training facility used during World War II. The site was subsequently transferred to the U.S. Air Force and was used as a basic training facility during the Korean War. The New York State Park System acquired the site after the base closed, opening Sampson State Park in 1963. In addition to its various camping, boating, and recreation amenities, the park includes a military museum highlighting its history and honoring the Navy and Air Force servicemen that were garrisoned and trained at the site.

Poor band conditions limited me to five contacts and therefore it could not be counted as a formal activation based on POTA rules. However, I had a great time and will use this experience to help me in future successful POTA activations.



2024 Field Day Highlights



GCARC Ham Exam Preparation Class Schedule
2024 Session VIII - Class Times : 1800 - 2100 Hours
Weeks 1 through 10 + Review & VE Testing Week

Class Week	Class Date	License Class Study
Week 1	Monday, September 9, 2024	Technician Class
Week 1	Tuesday, September 10, 2024	General Class
Week 1	Friday, September 13, 2024	Amateur Extra Class
Week 2	Monday, September 16, 2024	Technician Class
Week 2	Tuesday, September 17, 2024	General Class
Week 2	Friday, September 20, 2024	Amateur Extra Class
Week 3	Monday, September 23, 2024	Technician Class
Week 3	Tuesday, September 24, 2024	General Class
Week 3	Friday, September 27, 2024	Amateur Extra Class
Week 4	Monday, September 30, 2024	Technician Class
Week 4	Tuesday, October 1, 2024	General Class
Week 4	Friday, October 4, 2024	Amateur Extra Class
Week 5	Monday, October 7, 2024	Technician Class
Week 5	Tuesday, October 8, 2024	General Class
Week 5	Friday, October 11, 2024	Amateur Extra Class
Week 6	Monday, October 14, 2024	Technician Class
Week 6	Tuesday, October 15, 2024	General Class
Week 6	Friday, October 18, 2024	Amateur Extra Class
Week 7	Monday, October 21, 2024	Technician Class
Week 7	Tuesday, October 22, 2024	General Class
Week 7	Friday, October 25, 2024	Amateur Extra Class
Week 8	Monday, October 28, 2024	Technician Class
Week 8	Tuesday, October 29, 2024	General Class
Week 8	Friday, November 1, 2024	Amateur Extra Class
Week Nine	Monday, November 4, 2024	Technician Class
Week Nine	Tuesday, November 5, 2024	General Class
Week Nine	Friday, November 8, 2024	Amateur Extra Class
Week 10	Monday, November 11, 2024	Technician Class
Week 10	Tuesday, November 12, 2024	General Class
Week 10	Friday, November 15, 2024	Amateur Extra Class
Week 11	Monday, November 18, 2024	Technician Class Review & Exam
Week 11	Tuesday, November 19, 2024	General Class Review & Exam
Week 11	Friday, November 22, 2024	Amateur Extra Class Review & Exam

2024-2028 Element 4 Amateur Extra Class License Question Quiz

This month we continue with Subelement E1 Commission Rules (6 exam questions - 6 groups).
(Answers on 'Last Page Calendar')

E1B01
Which of the following constitutes a spurious emission?
A. An amateur station transmission made without the proper call sign identification
B. A signal transmitted to prevent its detection by any station other than the intended recipient
C. Any transmitted signal that unintentionally interferes with another licensed radio station and whose levels exceed 40 dB below the fundamental power level
D. An emission outside the signal's necessary bandwidth that can be reduced or eliminated without affecting the information transmitted

E1B02
Which of the following is an acceptable bandwidth for digital voice or slow-scan TV transmissions made on the HF amateur bands?
A. 3 kHz
B. 10 kHz
C. 15 kHz
D. 20 kHz

E1B03
Within what distance must an amateur station protect an FCC monitoring facility from harmful interference?
A. 1 mile
B. 3 miles
C. 10 miles
D. 30 miles

E1B04
What must the control operator of a repeater operating in the 70-centimeter band do if a radiolocation system experiences interference from that repeater?
A. Reduce the repeater antenna HAAT (Height Above Average Terrain)
B. File an FAA NOTAM (Notice to Air Missions) with the repeater system's ERP, call sign, and six-character grid locator
C. Cease operation or make changes to the repeater that mitigate the interference
D. All these choices are correct

E1B05
What is the National Radio Quiet Zone?
A. An area surrounding the FCC monitoring station in Laurel, Maryland
B. An area in New Mexico surrounding the White Sands Test Area
C. An area surrounding the National Radio Astronomy Observatory
D. An area in Florida surrounding Cape Canaveral

Element 4 Amateur Extra Class Quiz - Continued on page 32

Element 4 Amateur Extra Class Quiz - Continued from page 31

E1B06

Which of the following additional rules apply if you are erecting an amateur station antenna structure at a site at or near a public use airport?

A. You may have to notify the Federal Aviation Administration and register it with the FCC as required by Part 17 of the FCC rules
B. You may have to enter the height above ground in meters, and the latitude and longitude in degrees, minutes, and seconds on the FAA website
C. You must file an Environmental Impact Statement with the EPA before construction begins
D. You must obtain a construction permit from the airport zoning authority per Part 119 of the FAA regulations

E1B07

To what type of regulations does PRB-1 apply?

A. Homeowners associations
B. FAA tower height limits
C. State and local zoning
D. Use of wireless devices in vehicles

E1B08

What limitations may the FCC place on an amateur station if its signal causes interference to domestic broadcast reception, assuming that the receivers involved are of good engineering design?

A. The amateur station must cease operation
B. The amateur station must cease operation on all frequencies below 30 MHz
C. The amateur station must cease operation on all frequencies above 30 MHz
D. The amateur station must avoid transmitting during certain hours on frequencies that cause the interference

E1B09

Which amateur stations may be operated under RACES rules?

A. Only those club stations licensed to Amateur Extra class operators
B. Any FCC-licensed amateur station except a Technician class
C. Any FCC-licensed amateur station certified by the responsible civil defense organization for the area served
D. Only stations meeting the FCC Part 97 technical standards for operation during an emergency

E1B10

What frequencies are authorized to an amateur station operating under RACES rules?

A. All amateur service frequencies authorized to the control operator
B. Specific segments in the amateur service MF, HF, VHF, and UHF bands
C. Specific local government channels
D. All these choices are correct

E1B11

What does PRB-1 require of state and local regulations affecting amateur radio antenna size and structures?

A. No limitations may be placed on antenna size or placement
B. Reasonable accommodations of amateur radio must be made
C. Such structures must be permitted when use for emergency communications can be demonstrated
D. Such structures must be permitted if certified by a registered professional engineer

Amateur Radio Emergency Services - August 2024 Resources - News - Updates

By Bob Keogh, KD2NEC - kd2nec@qsl.net
Gloucester County Emergency Coordinator

Introduction To ARES

ARES Registration

- Anyone can register themselves for the ARES Program by simply downloading the registration form from the ARRL Website or reach out to me at KD2NEC@QSL.NET and I will send you a copy of the form.

ARES Training

- The required ARES training can also be found on the **ARRL website (https://www.arrl.org/ares)** but if you prefer, I can also email you the Training Plan.

ARES NET

- Anyone can participate on the weekly ARES Net on Sunday evenings at 8PM on the 147.180 Repeater.
- The primary purpose of the ARES Training NET is to become proficient in emergency communications protocol. One of our experienced operators will provide you with instructions at the beginning of each weekly NET.

When All Else Fails®

Amateur radio operators use their training, skills, and equipment to provide communications during emergencies "When All Else Fails®". Hams serve our communities when storms or other disasters damage critical communication infrastructure, including cell towers, and wired and wireless networks. Amateur Radio can function completely independently of the internet and phone systems. An Amateur Radio station can be set up almost anywhere in minutes. Hams can quickly raise a wire antenna in a tree or on a mast, connect it to a radio and power source, and communicate effectively with others.

Amateur Radio Emergency Service® (ARES®)

- **ARES Fact Sheet [PDF] (https://www.arrl.org/files/file/EMCOMM/ARES%20FACT%20SHEET%201.pdf)**
- **ARES Plan [PDF] (https://www.arrl.org/files/file/ARES%20PLAN%2024%20Final.pdf)**
- **ARES Standardized Training Plan Task Book [Fillable PDF] (https://www.arrl.org/files/file/ARES%20Taskbook%20July%202024.pdf)**
- **ARES Standardized Training Plan Task Book [Word] (https://www.arrl.org/files/file/ARES%20Taskbook%20July%202024.doc)**

The **Amateur Radio Emergency Service (ARES)** consists of licensed amateurs who have voluntarily registered their qualifications and equipment, with their local ARES leadership, for communications duty in the public service when disaster strikes.

SNJ ARES Update - Continued on page 34

SNJ ARES Update - Continued from page 33

ARES Membership Requirements

Every licensed amateur, regardless of membership in ARRL or any other local or national organization is eligible to apply for membership in ARES. Training may be required or desired to participate fully in ARES. Please inquire at the local level for specific information. Because ARES is an Amateur Radio program, only licensed radio amateurs are eligible for membership. The possession of emergency-powered equipment is desirable, but is not a requirement for membership.

How to Get Involved in ARES

Fill out the **ARES registration form (https://www.arrl.org/files/file/fsd98(2).pdf)** and submit it to me.

If you have any questions regarding ARES registration, training, or other sources of information, please do not hesitate to send me an email or give me a call.

Bob Keogh, KD2NEC
Emergency Coordinator
Email: KD2NEC@QSL.NET
Cell Phone: (609) 970-4467

AMERICAN RED CROSS : ARES EMERGENCY COMMUNICATIONS

New Jersey ARES and the New Jersey Region of the American Red Cross, have a formal agreement that whenever the commercial communications networks have been disrupted by a weather related incident or cyber attack, the Red Cross of New Jersey will activate ARES to provide emergency communications by using our radio equipment.

American Red Cross

The Red Cross has provided us with a 6' x 12' cargo trailer to convert into an emergency communications trailer. We are still in the planning and design phase of this project.

On the right is a picture of the Red Cross trailer and tow vehicle they provided, that is stored at the Washington Township Fire Department.

SNJ ARES Update - Continued on page 35

SNJ ARES Update - Continued from page 34

ARRL News
Amateur Radio Participates In World’s Largest Naval Exercise

“Partners : Integrated and Prepared” is the theme for **Rim of the Pacific (RIMPAC) 2024 (https://www.cpf.navy.mil/RIMPAC)**, the world’s largest international military maritime exercise, which began June 27, and will come to a close on August 1. Conducted from Joint Base Pearl Harbor-Hickam in Oahu, Hawaii, the exercise encompasses many islands in the Hawaiian chain.

The event included 29 nations, 40 surface ships, three submarines, 14 national land forces, more than 150 aircraft, and more than 25,000 personnel, including Amateur Radio operators working with health care facilities.

The Amateur Radio portion of the exercise has been completed. ARRL Assistant Section Manager and State Government Liaison **Michael Miller, KH6ML**, said 36 Amateur Radio operators from Hawaii volunteered to demonstrate the value of Amateur Radio in emergency preparedness and response.

> *“It turned out very good,” said Miller. “Some of hospitals, staff and administrators involved had their first experience with Amateur Radio. The operators were able to blend their skills using public service radios, satellite phones, as well as Amateur Radio.”*

Miller pointed out that hospitals on the smaller islands don’t usually have a full-time communications officer, so working with Amateur Radio gives them experience for future emergencies. The amateurs worked with **Health Comm Hawaii (https://ham.aditl.com/hc)** which provides Amateur Radio communications to health care associations in Hawaii during emergencies and disasters.

> *“Health Comm Hawaii really needs 100 more operators for backup and to build skill sets through monthly exercises,” Miller added.*

Vice Admiral John Wade, commander, U.S. 3rd Fleet and **RIMPAC 2024** Combined Task Force (CTF) commander, said the Rim of the Pacific exercise has grown over the years to be the world’s largest and premier joint maritime training opportunity.

> *“The exercise’s purpose is to build relationships, to enhance interoperability and proficiency, and, ultimately, contribute to the peace and stability in the vitally important Indo-Pacific region.”*

Many of the volunteers participating in **RIMPAC 2024** are also members of other vital emergency communication groups, such as **Amateur Radio Emergency Service®(ARES®)**, **Radio Amateur Civil Emergency Service (RACES)**, and **Community Emergency Response Team (CERT)**.

Dick Rutan, KB6LQS, Record-Setting Pilot, Has Become A Silent Key

He passed away at the age of 85 on May 3, 2024, surrounded by family. Rutan was an ARRL member.

Dick Rutan, KB6LQS, poses with his airplane.
[Photo from Dick Rutan/Facebook]

In 1986, Rutan made international headlines for his flight in Voyager with copilot Jeana Yeager. The pair flew around the world (nonstop and unrefueled) in 9 days, 3 minutes, and 44 seconds. Rutan was a highly decorated United States Air Force combat pilot in Vietnam. His civilian test pilot career had him flying everything from military jets to rocket-powered airplanes, in which he set speed records. In 2022, Mojave Air & Space Port in Mojave, California, was renamed Mojave Air & Space Port at Rutan Field in honor of the contributions he and his brother Burt had made to aviation. Read more about Dick Rutan on **ARRL News (https://www.arrl.org/news/dick-rutan-kb6lqs-record-setting-pilot-sk)**.

Article Credit : The ARRL Letter for May 9, 2024 - www.arrl.org

> ***"Ask not what your Club can do for you,***
> ***Ask what you can do for your Club"***
> ***- KA2OSV***

NTS 2.0 Upcoming - Traffic Measurement Tool and Test Traffic

Many know Rick Palm, K1CE, as the editor of the popular ARES Letter. As Rick notes, the NTS 2.0 Committee is working hard to raise the standard of operation of the NTS. If our service is ever to be called upon in an emergency and prove to be of value to the public, I think we can agree there is a need to obtain better coverage, better speed of operation, and better accuracy. To this end the NTS 2.0 committee is planning to introduce test traffic into the system on a somewhat regular basis to obtain actual data that will reveal where problems exist. Identifying a problem is, of course, necessary to finding a solution.

A year and a half ago, approximately 160 radiograms were sent from ARRL Headquarters to all Section Managers, Section Traffic Managers, Directors, Vice Directors, and ARRL officials. These messages contained an HXD handling instruction in which any operator handling one of these messages, whether relaying or delivering, was to send a report to HQ identifying the date and time the message was received and either sent or delivered. The process of sorting all the data received was a daunting task. To simplify this task, we are working on the creation of an online reporting tool that we hope will be taken advantage of by anyone handling test traffic. Our goal is to make this tool as simple and time-saving as possible for the traffic handler, while helping us to improve and raise the standard of our service to levels not only expected by emergency communications agencies, but ones we can all be proud of, and where we can find a sense of purpose along with the fun we have always enjoyed. Stay tuned for more details.

Article Credit : The NTS Letter for May 7, 2024 - www.arrl.org

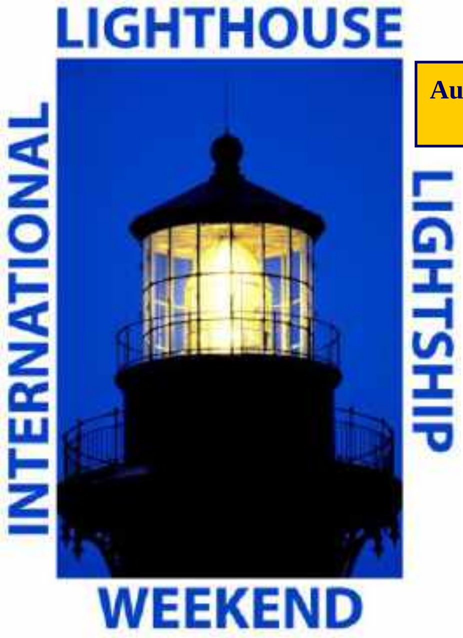
Volunteer Monitor Program Report : May 2024

The Volunteer Monitor (VM) Program is a joint initiative between ARRL and the FCC to enhance compliance in the Amateur Radio Service. This is the May 2024 activity report of the VM Program.

- Two operators in Virginia and Florida received advisory notices concerning wideband operation of 6 to 7 kHz wide on 40 meters, contrary to FCC rules. Section 97.307(a) provides that “no amateur shall occupy more bandwidth than necessary for the information rate and emission type being transmitted, in accordance with good amateur practice."
- A GMRS operator received an advisory notice for operating on an amateur repeater in Tennessee after being requested by the repeater owner to stay off the repeater. Any further operation will be referred to the FCC.
- An operator in South Carolina received a commendation for activities on the Grand Strand Amateur Radio Club repeater operating on 147.100 and 441.775 MHz. The operator participated as net control for the first time, on short notice, and managed all check-ins in a timely and efficient manner.
- An operator in Louisiana received an advisory notice for operation with an expired license.
- Technician-class operators in Indiana, Idaho, and Mississippi received advisory notices for operating FT8 on 40 meters. Technicians may operate only CW on 40 meters.
- An operator in Maine received an advisory notice for failure to identify during an hour-long transmission on 75 meters. Section 97.119(a) requires amateur stations to transmit the assigned call sign at the end of each communication and at least every 10 minutes during a communication.
- A glider pilot club in Clermont, Florida, received an advisory notice for operation on amateur frequencies without a license. Any further operation will be referred to the FCC.
- The FCC issued a Notice of Unlicensed Operation to a sky-diving organization in Lake Elsinore, California. The organization must cease operation and respond to the FCC within 30 days.
- In May, there was one meeting with the FCC. A VM program presentation was given at Dayton Hamvention on May 18.

The totals for hours of monitoring by Volunteer Monitors during April 2024 will be reported in the June VM report.

Thanks to Volunteer Monitor Program Administrator Riley Hollingsworth, K4ZDH



August 17 - 18, 2024
www.illw.net

Happy Birthday : August 4, 1790

Regional Skywarn Websites For On-Line And In-Person Training Classes

Philadelphia/Mt Holly Skywarn : www.weather.gov/phi/skywarn
State College, PA Skywarn : www.weather.gov/ctp/skywarn
Pittsburgh, PA Skywarn : www.weather.gov/pbz/skywarn

Gloucester County Amateur Radio Club Elmers

We are still looking for some more Club Elmers. If you would to add your name to the Elmer's List, send your specialty to w2mmdgcarc@gmail.com. Here is what we have so far :

- **Tony Starr, K3TS : Antenna Construction; Contesting; CW Help and Training**
- **Ken Bozarth, KN2U : Antennas**
- **Jeff Welsh, KD2AZI : Boat Anchor Repair & Operation; Raspberry Pi; Arduino; Python; POTA; Mobile Installation & Operating**
- **Karl Frank, W2KBF : Digital Messaging (FLDIGI, WinLink)**
- **Lenny Rust, W2LJR : DMR Radios & Programming**
- **Ron Block, NR2B : Lightning protection & grounding**
- **Chris Prioli, AD2CS : Kit Building; Antenna Building; Radio Programming; PC and Electronic Troubleshooting; ham radio licensing & studying**
- **John Zaruba Jr, K2ZA : Yaesu System Fusion Radio Programming, POTA, SOTA**
- **Jerry Barnish, K2EAB : Radio Astronomy**
- **Mike Thompson, KG4JYA : Radio Astronomy; VARA (HF and FM); WinLink**
- **Steve Farney, W2SEF : WSJT-X; FT-8; LoTW; TQSL; Grid Square**
- **Carl Wittig, N2CRW : Audacity® Audio Editor**
- **Gary Mirkin, WA3SVW : FLDIGI; MMSSTV**
- **Jon Pearce, WB2MNF : Satellite Communications**
- **Frank Romeo, N3PUU : Toilet Installer; Jack-Of-All Trades - Master Of None**
- **John Hill, W2HUV : Local & Remote W2MMD HF Station Operation, Training & Support**
- **Dave Sheppard, W2PAX : National Traffic System**

Full Sturgeon Moon : August 19, 2024 @ 1428 Hours

Lake sturgeon, found in the Great Lakes and Lake Champlain, as well as in several rivers, were once much more abundant. These large (some more than 6 feet long!) migratory fish were an important staple for Native American peoples living in the area. Captain Jonathan Carver came across this term for the lunar month during his travels in the 1760s. Flying Up Moon is a Cree term describing the time when young birds are ready to fly. Corn Moon (Algonquin, Ojibwe), Harvest Moon (Dakota), and Ricing Moon (Anishinaabe) signify the time to gather mature crops. The Assiniboine people named this period Black Cherries Moon, referring to when chokecherries were ripe. The Tlingit called this time of season the Mountain Shadows Moon.

Old Farmer's Almanac - www.almanac.com

Remote Antenna Switch and Controller Build - Part 1

By Chris Prioli, AD2CS - chris@ad2cs.com - www.ad2cs.com

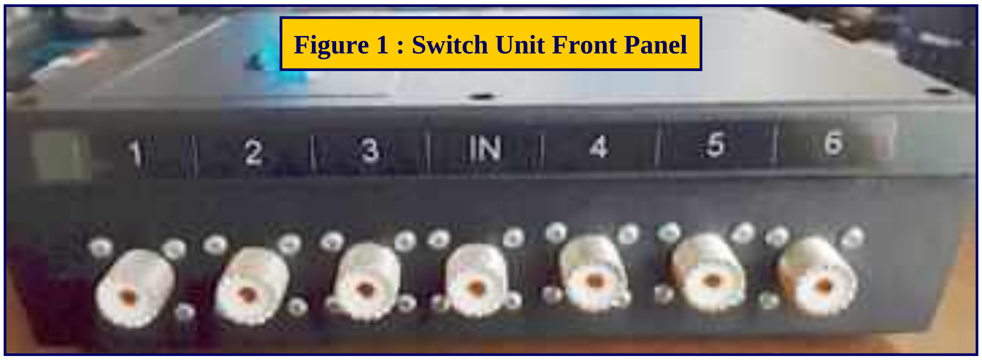


Figure 1 : Switch Unit Front Panel

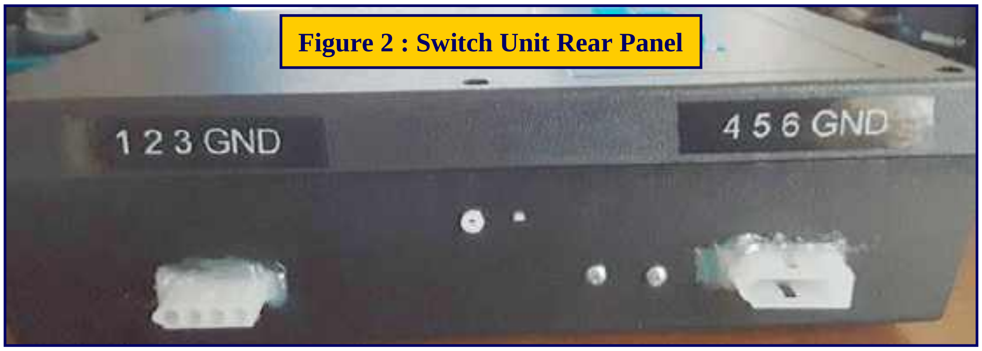


Figure 2 : Switch Unit Rear Panel

In April of 2023, I got tired of looking for a reasonably-priced remote antenna switch that was weather-sealed and could accommodate at least four antenna outputs. What with me being me, I decided to build it myself, so I started hunting for ideas. What I came across was a starting point for this project. Let me explain a little bit just what my needs were.

My antenna farm, when it is finally finished, will consist of antennas in two separate areas - out back behind my garage, and up on the roof of my house. Out back will be the bulk of the HF antennas, including a Hustler 5BTV vertical, a 6-band hex beam, a three-band fan dipole, and a 6-meter Hen Delta. All of these antennas will be fed via a single coaxial cable, which will carry the switching control as well as the RF output. The actual switching unit used here is a Heathkit® HD-1481 Remote Coax Switch. I found that unit NIB on **ebay.com**, and built it according to the manual. It is a two-piece setup, with the remote switch head being mounted out at the antenna field, and the controller in the shack. The coaxial cable used will be the ***Davis RF BuryFlex™ LM-400*** specification cable.

The house rooftop will also hold a small array of antennas, primarily VHF/UHF, though there will be one HF antenna up there. The VHF/UHF antennas include an Arrow 146-4 four-element 2-meter Yagi on a rotator on a chimney mount, with an Ed Fong DNBJ-2 J-pole in its 250W version above the Yagi, a Comet CX-333 tri-band vertical on a non-penetrating roof mount bracket over the roof peak, and a home-brew 1.25-meter copper pipe J-pole on an arm on the NPRM bracket. All of these antennas will be fed via a single coaxial cable feed. There will be a second coaxial line going to the roof, however, because I also plan on an end-fed 40-meter sloper that will run from the house roof to my garage roof. All of the VHF/UHF antennas will be selected by this new remote switch gear that I had decided to build. It is, of course, also a two-piece system, but this one does not impose the control signals onto the RF in the coaxial cable. Instead, a pair of four-wire cables will connect the controller in the shack with the switching head up on the roof.

I will describe each of the two units separately, starting with the switch unit **(Figures 1 and 2)**, as its design drove the design of the control unit. I had started out by doing some online research into antenna switch systems, to see what other folks had designed and built. I started out by looking for a relatively low-cost way to implement a four-antenna remote switch for the antennas that are going on my rooftop. I did not want to run multiple coaxial cables from the rooftop into the shack, so I was really working on a solution to this issue, when I came upon the ***KO4NR Low-Cost Antenna Switch*** article in the online supplemental material to the ***ARRL Handbook 100***, in the ***Station Accessory Projects*** chapter. This switch unit uses a half dozen relays to provide switching for up to six antennas, and is wired so as to ground the antennas not in use at any given time.

Remote Antenna Switch Build - Continued on page 40

Remote Antenna Switch Build - Continued from page 39

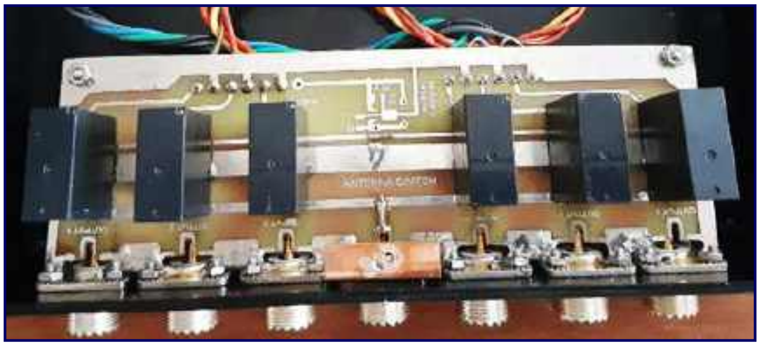


Figure 3 : Switch Unit PCB Installed In Enclosure

I read the article, thought about the design a while, and then I ordered the printed circuit board **(Figure 3)** from **FAR Circuits (https://www.farcircuits.net)** of Dundee, Illinois. Then I started to gather parts to build the unit. In addition to the American Zettler AZ755-1C-12DE relays, the switch unit consists of some very basic parts, namely six 0.001µF ceramic capacitors, six 1N4001 diodes, a pair of Phoenix 1729050-02 terminal strips, and seven SO-239 flange-mount jacks. When purchased from FAR Circuits, the PCB is shipped with the above relays and also with some grommets intended to improve relay connectivity to the PCB.

A few words are in order regarding the PCB from FAR Circuits. The board is of relatively low quality and required some modification and repairs in order to be made usable for its intended purpose. I was quite disappointed when I received and unpacked the board. To begin with, the board is a modification, ***i.e.***, a second version of the board described in the original ARRL article, with no advance warning of the change. Among the changes are the fact that the capacitors on the board are now surface mount devices, which were included with the board. However, the anti-spike diodes were omitted in this version of the board. I ended up adding them in directly across the relay coil pins. Also, although the board maker includes brass grommets meant to improve the relay contact pin connections to the board, an insufficient number of these grommets were shipped, necessitating a call to FAR Circuits to remedy the situation. In addition to that, one of the six relays included was an incorrect type, in that the shipment mistakenly had one Form A type (DPST) instead of a Form C (DPDT) relay.

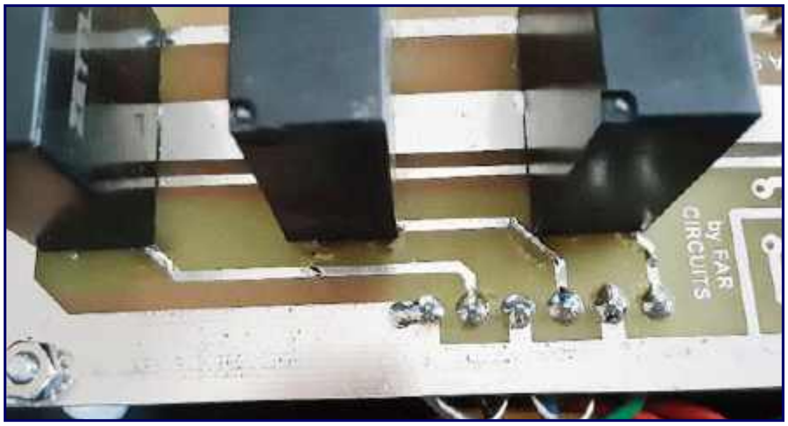


Figure 4 : Switch Unit PCB Showing Areas Of Trace Repairs

It is obvious that the resist masking used to manufacture the PCB was rather leaky. The PCB traces are, in general, weak and poorly defined. One of the PCB traces from the input terminals to the relay coils was missing a section of the trace, leaving insufficient trace area for the current to be carried. I repaired this by overlaying some wire along the trace **(Figure 4)**. At another location, one of the relay positions had five of the relay contact pin holes drilled to accept the grommet, while the sixth was not so drilled. I ended up drilling the hole to the proper size to accept the grommet. This is necessary because the brass grommets are used to carry signal current through the board to the traces on the other side, as the board holes are not through-plated. Finally, the PCB trace areas where the SO-239 connectors attach to the edge of the PCB were flimsy and undersized, and a poor fit to ***any*** of the SO-239 variants that I tried to fit, including the expensive Amphenol connectors cited in the original article. I ended up bridging the gaps with some flat copper braid or some bare wire from the shell of each SO-239 to the PCB traces. Another problem is that the PCB installation provisions for the Phoenix 1729050 6-circuit terminal strips are rather poorly prepared. On one side of the PCB, there are pads for one of the terminal strips, but not for the second strip. In any event, the pads are largely worthless, as the holes themselves are not through-plated. The board design prevents the builder from installing the terminal strips on the “component side” of the PCB. This is not a big deal other than the fact that with this installation location, it becomes necessary to connect the switch control input wires to the terminal strips before installing the PCB into the enclosure. Let the buyer beware!

Remote Antenna Switch Build - Continued on page 41

Remote Antenna Switch Build - Continued from page 40

This version of the board is designed to provide for active low or active high control of the relays, using a three-pin header with a shorting cap to make that selection. I opted to simply install a jumper wire between the PCB holes instead of using the jumper setup. The board also includes traces and pads for a 12V three-pin SMT voltage regulator for use in instances where the builder is supplying a higher voltage, like 24VDC, to the relay board. This regulator position also includes pads for a 4.7µF capacitor in conjunction with the regulator. None of that was needed in my build, so I simply ignored that whole area of the board.

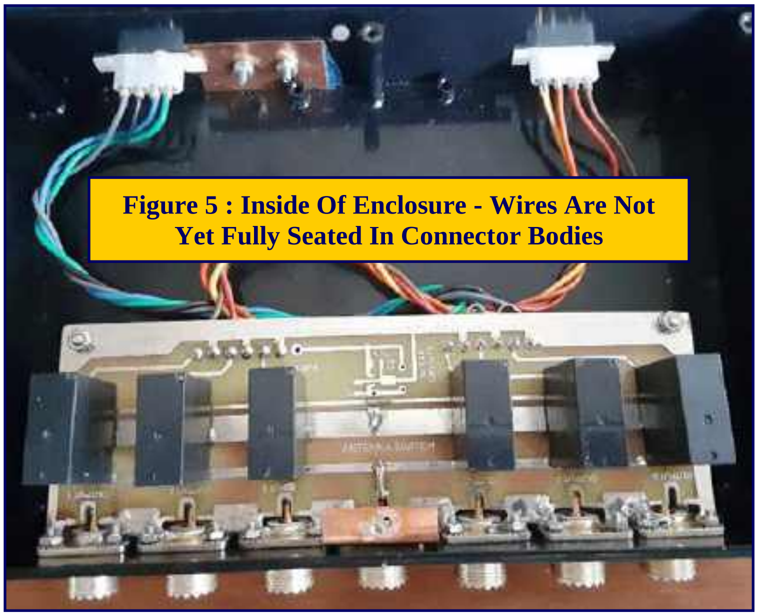


Figure 5 : Inside Of Enclosure - Wires Are Not Yet Fully Seated In Connector Bodies

To round out the switch unit construction, I decided to install the whole thing into a black ABS plastic 2-piece enclosure. The board measures 7.5” x 2.4”, and the SO-239 connectors are mounted along the long edge of the board. The enclosure that I used was one that I had on hand, and it measures 9.5” x 6.35” x 2.4”, more than large enough to do the job. Along one of the long faces of the lower section of the enclosure, I laid out and drilled the holes for the seven SO-239 connectors. There are seven such connectors because one of them - the center connector - is the RF input to the switch unit. The remaining six connectors are the various antenna RF outputs from the switch. Any unused SO-239 connectors are covered with weather-tight threaded caps on chains.

Once the holes were drilled, I dry-fitted the assembled board to the enclosure and marked out the two holes for the inner edge support of the PCB within the enclosure. Then I laid out and cut the two holes for the Molex four-pin connector bodies **(Figure 5)** to be mounted to the opposite long face of the enclosure lower section. As it turns out, I made a small error in actually cutting one of these openings, making it about three-eighths of an inch longer than it should have been. As a result, the Molex shell mounted at that location is secured by a small piece of copper sheet metal mounted to the enclosure on the inside of the enclosure. To prevent cross-connection of the two cables from the controller, one of these Molex connectors has male pins while the other one has female sockets. The same arrangement was used on the controller unit rear panel, making it impossible to cross-connect the control cables. Inside the enclosure, each of the Phoenix connectors on the PCB are carried out to the rear panel Molex connectors by color-coded hook-up wire.

The upper section of this enclosure is secured to the lower section via six screws, one in each corner and one centered along each of the long edges of the enclosure. As it turns out, one of those two center bosses onto which the cover securement screws would be inserted had to be cut away to accommodate the installation of the PCB along that face of the enclosure. This would have made the enclosure less weather-tight as there would be a loose area and a hole where the missing screw should have been.

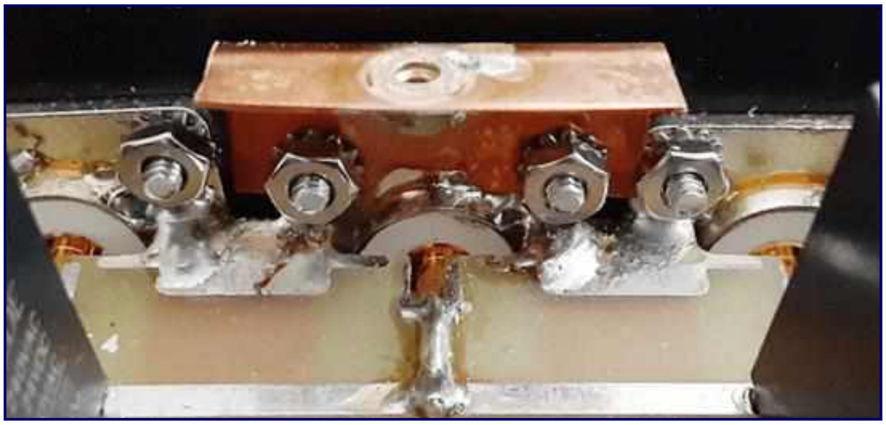


Figure 6 : Copper Sheet Metal Securement Fixture

Remote Antenna Switch Build - Continued on page 42

Remote Antenna Switch Build - Continued from page 41

To solve that problem, **(Figure 6)** I cut a small piece of copper sheet metal, laying out and drilling three holes in it, and then bending it so that it could be mounted to the upper two screws on the center SO-239 connector shell, placing a hole directly underneath the screw hole for the missing retaining screw.

I then soldered a brass nut to the copper sheet underneath that hole, making a fastener into which a 4-40 machine screw could be driven to secure the enclosure upper section properly all the way around its periphery. With all of the openings in the enclosure completely filled - I sealed the Molex connector shells to the enclosure with hot glue - the enclosure was now air tight. However, I wanted to vent the enclosure so as to allow for seasonal temperature and pressure changes without leaving openings for water or insects to get into the enclosure. To that end, I drilled two small holes and then installed a duck-bill vent into each of these two holes, facing in opposite directions **(Figure 7)**. Thus, one vent breathes in while the other breathes out, and the enclosure remains sealed against water or insect entry.

Once all was ready, I installed the PCB into the enclosure lower section, securing each SO-239 connector with four 4-40 x 3/8” machine screws with lock washers and hex nuts. The inner edge of the PCB is supported by stand-offs mounted to the floor of the enclosure, and the wires from the Phoenix connectors were inserted into their proper ports in the Molex connector shells. The enclosure upper section was installed to the lower and secured with the six screws intended for that purpose.

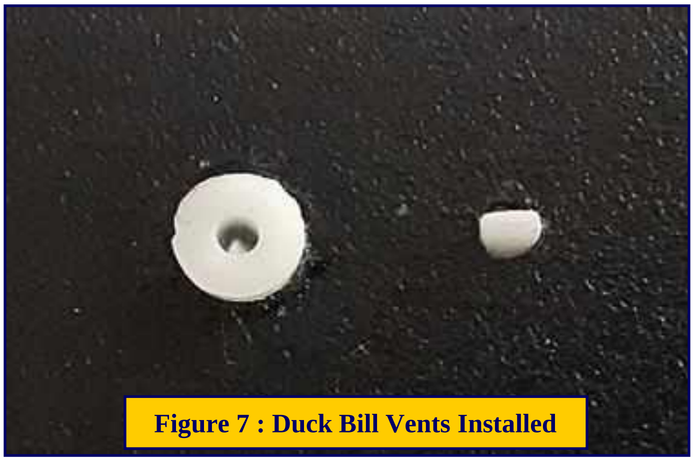


Figure 7 : Duck Bill Vents Installed

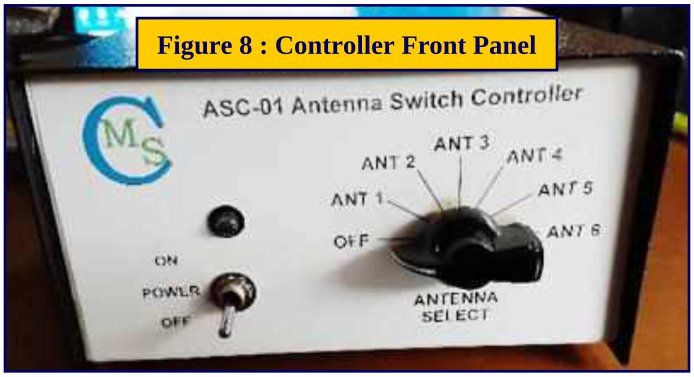


Figure 8 : Controller Front Panel

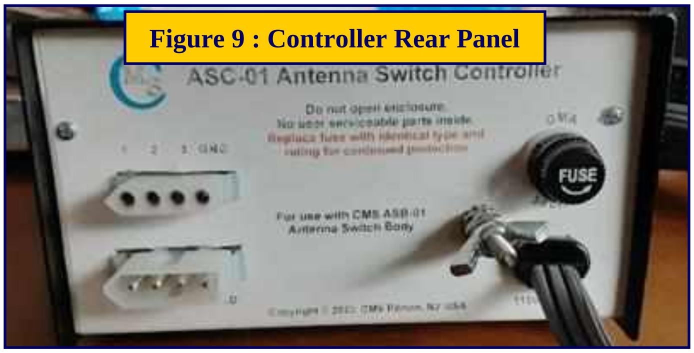


Figure 9 : Controller Rear Panel

The switch unit is the business end of the system. It requires a controller **(Figures 8 and 9)** in order to operate, and that controller is the subject of the next part of this article. I designed and built a simple but effective and relatively low-cost controller that can provide the requisite voltage and current to operate the switch unit relays despite some voltage drop in the connecting control cable assembly.

The heart of the controller is a common LM317 adjustable three-pin voltage regulator, rated for one ampere continuous current output at some adjustable regulated voltage. The switch unit uses 12VDC relays for its switching members. The relay coil current demand is on the order of 158mA at 68° F, so the one ampere capacity of this regulator should be more than adequate even in worst-case conditions. The LM317 was chosen instead of the simpler to deploy LM7812 because I wanted the ability to adjust the circuit output voltage up a bit to compensate for any control cable voltage drop, thus providing the ability to maintain the optimal 12 volts to the relay coils. While it is true that the relays will operate at lower voltages, I wanted to design for best operating conditions.

Part 2 of Remote Antenna Switch and Controller Build will be in the September 2024 CrossTalk
The full version is on the website at : https://gloucestercountyarc.weebly.com/remote-antenna-switch.html

Gloucester County Amateur Radio Club
General Membership Meeting Minutes
Wednesday, July 3, 2024

Meeting opened @ 1900 Hours by President Jon Pearce, WB2MNF with the Pledge of Allegiance to the Flag

ATTENDANCE :

- **In-person : 45**
- **Zoom : 11**

VISITORS :

- **Roy Herman, WB2EOD**
- **Dara Herman, KC2THQ**
- **Jillian Guenther**

NEW MEMBERS :

- **Daniel Caguiat, KE2DPR, Sicklerville, NJ**
- **Chris Ciraula, KD2SBR, Elmer, NJ**
- **Harry Eshleman Jr, KE2DQA, Monroeville, NJ**
- **Jacques Latoison, KC3VYU, Chester, PA**
- **Sheree Revilla, KE2DRK, Woodbury, NJ**

UPGRADES :

- **Diane Amico, W2WHD, New vanity callsign, upgraded to General Class**
- **Mike Angelastro, KE2DPQ, New Technician Class**
- **James Beury, KE2DRN, New Technician Class**
- **Anish James, KE2DRI, New Technician Class**
- **Kerri Caguiat, KE2DKD, Passed Technician and General Class exams**
- **Angela Metzger, KE2DRJ, New Technician Class**
- **Ron Newman, KE2DPO, Upgraded to General Class**
- **Rosemarie Newman, KE2DPP, Upgraded to General Class**
- **Aimée Ortiz, K9RVT, Upgraded to General Class**
- **Sheree Revilla, KE2DRK, New Technician Class**
- **Jacob Scholz, KC2QYT, Upgraded to General Class**
- **Jason Watkins, KD2VVJ, Upgraded to General Class**

UPCOMING EVENTS :

- **August 7, 2024 : General Membership Meeting Program - State QSO Party**
- **September 4, 2024 : General Membership Meeting - Overview of Digital Modes**
- **October 2, 2024 : General Membership Meeting - VHF Propagation Modeling**

BUSINESS MEETING

Minutes of June 2024 business meeting as published in Crosstalk were approved by voice vote of members present.

July 2024 General Membership Meeting Minutes - Continued on page 44

July 2024 General Membership Meeting Minutes - Continued from page 43

TREASURER'S REPORT :

- 2024 Operating Profit and Loss
- Operating Revenue : $13,326
- Operating Expenses : $4,770
- Net Operating Income : $8,556

Motion to approve the Treasure's report passed by voice vote of members present.

GLOUCESTER COUNTY AMATEUR RADIO CLUB FOUNDATION :

- Report : GCARC Foundation Board approved spending $1,000 to support the balloon launch project.

CLUBHOUSE REPORT :

- Report : **Al Arrison, KB2AYU** reported repairs to one of the VHF tower bases are complete.

TECHNICAL COMMITTEE :

- Report : **Jon Pearce, WB2MNF** discussed the upcoming balloon launch.

DX AND CONTESTS :

- Report : **Tony Starr, K3TS** reported on the upcoming North American QSO Party RTTY and 13 Colonies contests.
- **Jim Wright, N2GXJ** presented the preliminary Field Day results, official results will be published in the December 2024 QST magazine.

PUBLIC SERVICE :

- Report : **Bob Keogh, KD2NEC** reported on the status to the American Red Cross Communications trailer project.

EDUCATION COMMITTEE :

- Report : **Chris Prioli, AD2CS** reported the July 8, 2024 Advanced SMT Soldering Class sign ups are still open.

OLD BUSINESS : None

NEW BUSINESS :

- Internet connection from Comcast at the Clubhouse needs to be upgraded. Motion to fund an additional $50 per month approved by voice vote of members present.
- Motion to fund $70 for Club badge fasteners approved by voice vote of members present.

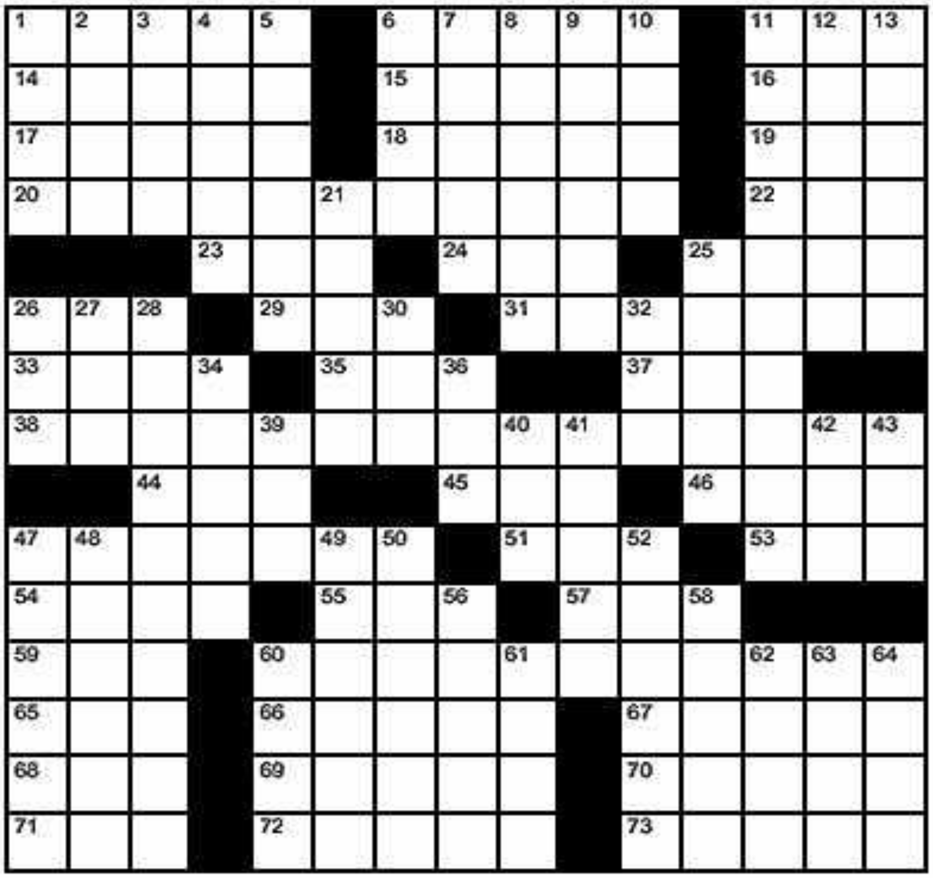
PRESENTATION : Pizza Night

Meeting adjourned @ 1940 Hours

Respectfully submitted,
John Zaruba Jr, K2ZA,
Recording Secretary

by Chris Codella, W2PA 8/10/2009

Ham Humor, Part 2



Crossword Puzzle courtesy of https://www.w2pa.com/Home/articles/crossword-puzzles

Across

1. Remembered place in W5-land

6. Sprays

11. Small rigs

14. F3 compared with A1, say

15. HPM call sign, once

16. Deleted entity island, with Abu

17. A4 denizen

18. J6 name

19. 9/11 year

20. Frequent author in 60-across

22. F9 wine

23. An H follower

24. W1 to CN dir

25. I-land good

26. UTC predecessor

29. Thyristor type

31. News

33. Detect after the detector

35. Famous W4 suffix (SK)

37. Cyber attacker, with net

38. What 20 across' articles described

44. Alpha male suffix?

45. Former F coin

46. CW, to FCC

47. Adobe product

51. Dir. for HL from W2

53. W5 ARRL sect.

54. Sinister look

55. OSCAR, for one

57. Ham equipment dealer

59. Sometimes accompanies a QSL with an SAE

60. Frequent place for ham humor

65. Opposite of paleo-

66. Elmer, in a way

67. VOA part

68. Diamond or Comet mounting place

69. Equatorial prefix

70. 720 and 753, for example

71. Opposite of 65 across

72. Amplifier, slangily

73. Sloper orientation

Down

1. Roll call misser

2. Before mike

3. 4X month

4. The brainy bunch

5. Tennessee transceivers

6. XE sauce

7. Accustom (to)

8. Trig ratio

9. BV city

10. Shop partner, on a net, say

11. Takes place at Hara

12. It's everything, often

13. Collins sets

21. Scratches, as to a wire

25. Flora and fauna

26. JK predecessors

27. Storage, for short

28. What we did before wav, mp3, etc.

30. Ham bane

32. Ant. performance meas.

34. Yagi yawer

36. KB2GSD network

39. Weep

40. Skywave reflector

41. EME path

42. Suffix with persist

43. Driver's license datum

47. Maker of 11 across, for example

48. Some like it hot

49. Per se

50. Arm art

52. Interlaces

56. Iceland ID

58. Go bad

60. Locales

61. Loads from lodes

62. TI last name

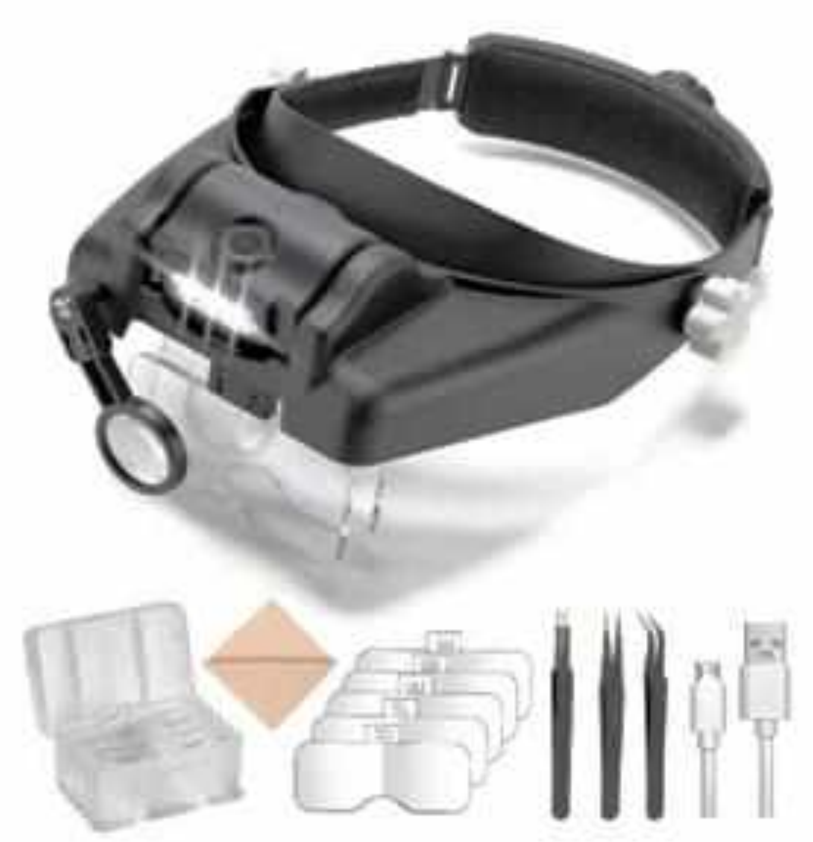
63. Desktop feature

64. "___ we forget"

Answers on Page 52

Electronic Tool Tip #8 - Lighted Helmet Magnifier

By Chris Prioli, AD2CS - chris@ad2cs.com - www.ad2cs.com



Working with miniaturized components can be a challenge in more ways than one. Right now, however, we are going to discuss the vision aspect of miniature components - or maybe even not-so-miniature items.

Not very long ago, my vision was failing badly due to cataracts and glaucoma. As a result, I had lens replacement surgery for the cataracts, and I had stents implanted at the same time for the glaucoma. Now, some five months later, my vision has stabilized at the acuity level that it will be from here on out. After wearing eyeglasses for sixty years for extreme myopia, I can now see great distances perfectly well. It is for the close at hand that I now need some help. Most of the time, I find that help in the form of two different pairs of reading glasses, each having a different diopter level. I swap them off depending upon how close I need to see. However, I have found a great tool that helps immensely, in a one-size-fits-all variety.

I am talking about the helmet-style lighted magnifier shown above. This unit is worn like a welding helmet, and it flips up out of the way the same way that a welding helmet does when it is not needed. What is great about this unit is that it is illuminated with three super-bright LED’s that can be aimed and can be set to either one of two brightness levels as needed. The best thing of all about this tool is the fact that it uses interchangeable main magnifying lenses, which can be used singly or in any combination of two lenses simultaneously. The lenses supplied include 1.0X, 1.5X, 2.0X, 2.5X, and 3.5X magnification levels. The unit also has a small auxiliary lens at 8.0X that can be swung into place for those really hard to see things. The instruction sheet provides a table that lists the effective magnification and focal lengths of the various lens combinations, which range from 1.0X up to 14.0X and from 35mm (at 14.0X) out to 500mm (at 1.0X). The main lenses snap into holders that can be individually swung up out of the way when not needed.

The magnifier includes a rechargeable (and replaceable) 3.7V 300mAh lithium polymer ion battery, part number 602030, which is readily available from various online sources. From fully discharged, recharging the battery takes about an hour and a half, and a full charge lasts about eight hours. The unit as sold includes a micro-USB charging cable, a set of three static-free stainless steel tweezers, a cleaning cloth for the lenses, and a storage case to hold the lenses when not in use.

This magnifier is available online from Amazon, at a price of $35.99 (USD) plus shipping if you are not an Amazon Prime member. However, in the last week, the Amazon availability of this item has changed, leading me to point out the existence there of an almost identical but less-expensive alternative unit. This option comes in at a price of $28.04 (USD). Of course, the governor has to get his share, so tax will also be applied.

Go to https://www.amazon.com/dp/B0BKQXP9Z1 to investigate the original item, or to https://www.amazon.com/dp/B0BL2QT8D4 to investigate the second item for yourself.

Gloucester County Amateur Radio Club
Board of Directors Meeting Minutes
Wednesday, July 17, 2024

Meeting opened @ 1900 Hours by President Jon Pearce, WB2MNF

Attendance :

- **President Jon Pearce, WB2MNF : Present**
- **Vice President Ron Block, NR2B : Present**
- **Treasurer John O'Connell, K2QA : Present**
- **Recording Secretary John Zaruba Jr, K2ZA : Present**
- **Corresponding Secretary Mike Resnick, N2WOQ : Present**
- **Director (2022-2024) Jeffrey Garth, WB2ZBN : Present**
- **Director (2022-2024) Frank Romeo, N3PUU : Present**
- **Director (2023-2025) Chris Prioli, AD2CS : Present**
- **Director (2023-2025) James Wright, N2GXJ : Present**
- **Director (2024-2026) Al Arrison, KB2AYU : Present**
- **Director (2024-2026) Bill Price, NJ2S :**
- **Trustee (2021-2024) Carl Wittig, N2CRW**
- **Trustee (2022-2025) Charles Lanard, KD2EIB**
- **Trustee (2023-2026) Sheldon Parker, K2MEN**
- **Trustee (2024-2027) Len Rust, W2LJR**
- **Member Bruce Canino, KD2LBU : Present**
- **Member Karl Frank, W2KBF : Present**
- **Member Micky Zerby, W2EFR : Present**
- **Member Doug Dersch, KD2VQA : Present**

New Member Applications :

- **Christopher Angelastro, KE2DST, Cherry Hill, NJ**
- **Deirdre Hebert, AD2GQ, Blackwood, NJ**
- **John McGonigle, KC3ZJX, Drexel Hill, PA**
- **Robert Repetto, KE2DSX, Blackwood, NJ**
- **Gregg Rudinski, KE2DRM, North Cape May, NJ**
- **Paul Sandora, Bridgeton, NJ**

New membership applications approved by voice vote of Officers present.

Treasurer's Report

- **Income : $13,995.32**
- **Expense : $5,495.69**
- **Net : $8,499.63**

Detailed financial statements are available for member review upon request.

Treasurer's report approved by voice vote of Officers present.

July 2024 Board of Directors Meeting Minutes - Continued on page 48

July 2024 Board of Directors Meeting Minutes - Continued from page 47

Clubhouse Report :

- **Internet upgrade completed.**
- **VHF Tower base repairs completed, needs to be painted.**
- **Discussion of tower base installation logistics.**
- **Discussion of HVAC issues in HF room.**
- **Home Assistant installed to provide remote control capabilities for air conditioning, energy monitoring, and switched plug control.**

Repeaters : No report

Nets :

- **2 Meter Net : June 2024 - Tuesday Average : 11 Check-ins, Thursday Average : 8 Check-ins**
- **10 Meter Net : Tuesdays and Thursdays at 1930 Hours**
- **40 Meter Net : Mondays and Thursdays at 1930 Hours**

Technical Committee :

- **Helium has arrived.**
- **Test flights using party balloons are scheduled this weekend.**
- **Tentative full sized balloon launch 8/17.**
- **Discussion of re-running some older Tech Saturday topics since there has been significant new membership.**

Programs Committee :

- **Discussion of potential issues and contingencies with the planned August General Membership Meeting program.**

Education Committee :

- **"You've Got Your License, Now What?" session on Monday 7/15 was very well attended.**
- **Follow-on session tentatively scheduled for August 17th.**

Hamfest Committee :

- **Discussion of public address speaker issues.**

GCARC Foundation :

- **$37 income from 50-50 donation.**
- **Purchased balloons for project.**

Old Business :

- **Volunteer Appreciation Award nominee discussion.**
- **Discussion of potential re-schedule of the January 1, 2025 GM Meeting.**
- **Confirmed we have provided internet access for 4H fair.**

New Business :

- **Echolink PC having stability issues, troubleshooting strategies discussed.**

Meeting adjourned @ 2007 Hours

Respectfully Submitted, John Zaruba Jr, K2ZA, Recording Secretary

North American QSO Party, SSB 2024
January 21, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : Single Op Assisted LP
QTH :
Operating Time (hrs) : 4
Location : USA

Summary :

Band	QSOs	Mults
40 :	25	22
20 :	28	17
15 :	10	7
10 :	8	7
Total :	71	53

Total Score : 3,763

Club : Frankford Radio Club **10**

CQ 160 Meter Contest, CW 2024
January 26, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : Single Op Assisted HP
QTH :
Operating Time (hrs) : 9
Location : USA

Summary :
Total : QSOs : 186 State/Prov : 35 Countries : 0
Total Score : 14,595

Club : Frankford Radio Club **14**

Comments :
My first contest on 160 meters and I had a blast!

K1USN Slow Speed Test 2024
February 5, 2024

Call : W2TEF
Operator (s) : W2TEF
Station : W2TEF

Class : Academy Single Op LP
QTH : Mullica Hill, NJ
Operating Time (hrs) : 1
Location : USA

Summary :

Band	QSOs	Mults
40 :	2	2
20 :	10	5
Total :	12	7

Total Score : 96 **21**

K1USN Slow Speed Test 2024
January 22, 2024

Call : K2ZA
Operator (s) : K2ZA
Station : K2ZA

Class : Single Op LP
QTH : FM29lo
Operating Time (hrs) : 1
Location : USA

Summary :

Band	QSOs	Mults
40 :	9	9
20 :	8	8
Total :	17	17

Total Score : 289

Club : **11**

Comments :
Using Elecraft KX3/PX3/KXPA100 @ 60w, 40m EFHW up 10m. Did better than last week.

CQ 160 Meter Contest, CW 2024
January 26, 2024

Call : K3TS
Operator (s) : K3TS
Station : K3TS

Class : Single Op Assisted HP
QTH : SNJ
Operating Time (hrs) : 8
Location : USA

Summary :
Total : QSOs : 330 State/Prov : 45 Countries : 13
Total Score : 949,300

Club : Frankford Radio Club **13**

Comments :
Not a really serious effort, but I beat last year's score by a bit. Managed to work a few EU stations on Friday night, but could not even hear any on Saturday night. It is what it is. Had a couple of short but decent runs, thanks to all who called in. Hopefully by next year we will be at a new QTH and maybe have some better antennas up. 73 for now. de K3TS

European Union DX Contest 2024
February 3, 2024

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : SOABCW HP
QTH : 08
Operating Time (hrs) : 4.5
Location : USA

Summary :

Band	CW Qs	Ph Qs	Countries	EU Regions
80 :	51	0	23	30
40 :	74	0	27	38
20 :	24	0	16	19
Total :	149	0	66	87

Total Score : 183,600

Club : Frankford Radio Club 17

Comments :
Rig : FTDX-9000D/OM Power 2000A+
Antennas :
160m Inverted L, RX HiZ4
80m dipole @ 95ft
40m dipole @ 85ft
10m,15m,20m C3S Yagi @ 52ft

4.5 hours op time.

Expected more activity. Contest overshadowed by other contests & operating events. Fun format, lots of EU region mults, and logical scoring.

73 Darrell AB2E

Contest : EU_DXC

Band	QSOs	Pts	Sec	DXc	Pt/Q
3.5	51	434	30	23	8.5
7	74	556	38	27	7.5
14	24	210	19	16	8.8
Total	149	1,200	87	66	8.1

Score : 183,600
1 Mult = 1.0 Q's

British Columbia QSO Party 2024
February 3, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : Single OpCW LP
QTH :
Operating Time (hrs) : 7
Location : Out of State/Province

Summary :

Band	CW Qs	Ph Qs	CW Mults	Ph Mults
40 :	2			
20 :	17			
15 :	18			
10 :	16			
Total :	53	0	43	0

Total Score : 9,176

Club : Frankford Radio Club 18

Minnesota QSO Party 2024
February 3, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : Single OpCW LP
QTH : NNJ
Operating Time (hrs) : 7
Location : Out of State/Province

Summary :

Band	CW-RTTY Qs	Ph Qs	
40 :	5		
20 :	56		
15 :	15		
Total :	76	0	Mults : 45

Total Score : 6,840

Club : Frankford Radio Club 19

Comments :
Great turnout by the FB MN operators and special thanks to the CW Rovers!

K1USN Slow Speed Test 2024
February 19, 2024

Call : W2TEF
Operator (s) : W2TEF
Station : W2TEF

Class : Academy Single Op LP
QTH : Glassboro, NJ
Operating Time (hrs) : 1
Location : USA

Summary : 29

Band	QSOs	Mults	
40 :	10	8	
Total :	10	8	Total Score : 80

CQ WPX RTTY Contest 2024
February 10, 2024

Call : AB2E
Operator (s) : AB2E
Station : AB2E

Class : SOAB HP
Class Overlay : TB-Wires
QTH : SNJ
Operating Time (hrs) : 9
Location : USA

Summary :

Band	QSOs
80 :	25
40 :	168
20 :	27
15 :	40
10 :	44

Total : 304 Prefixes : 214
Total Score : 181,472

Club : Frankford Radio Club **23**

Comments :
Rig : FTDX-9000D/OM Power 2000A+
Antennas :
80m dipole @ 95ft
40m dipole @ 85ft
10m/15m/20m C3S Force 12 Tribander @ 52ft

Operating time:9 hours Part-time effort. Leaving for VP9 early Wednesday, so packing and planning for that over the weekend. Add to that some family stuff, and a visit by Murphy who wanted to be a guest op. Good success when I CQ'd. MMTTY crashed with the infamous "Divide by 0" error for which there is no solution, according to posts on the Internet.

Uninstalled, reinstalled, still the same. Switched to an alternate laptop, all was well, but had to set up from scratch. S&p most of the weekend because clicking on the N1MM Band map spots took me to the wrong frequency. Sunday afternoon I finally figured out the spots were off by the value of the Mark, 2125hz. The box for DI1 Shift Frequency for Enabled needed to be checked. This now got the band map spots to decode for the most part, although the rig now read off by 2.125khz. No problem, just ignore the rig.

Thanks for all the FRC'ers who called in! Some amazing scores on the Contestonlinescores.com site!

CU next weekend as VP9I in ARRL DX CW, AB2E/VP9 from 14-19Feb outside of the contest.

73 Darrell AB2E

Vermont QSO Party 2024
February 3, 2024

Call : WB2PJH
Operator (s) : WB2PJH
Station : WB2PJH

Class : Single Op LP
QTH :
Operating Time (hrs) : 4
Location : Out of State/Province

Summary :

Band	CW Qs	Ph Qs	Dig Qs
160 :	1		
80 :	3		
40 :	6	9	
20 :	2	3	
15 :	2		
10 :	2		

Total : 16 12 0 CW Mults : 4 Ph Mults : 6
Total Score : 660

Club : Frankford Radio Club **20**

Tuesday, August 6, 2024

Contest : CQWPXRTTY

Band	QSOs	Pts	WPX	Pt/Q
3.5	25	80	16	3.2
7	168	558	124	3.3
14	27	46	16	1.7
21	40	65	25	1.6
28	44	99	33	2.3
Total	304	848	214	2.8

Score : 181,472
1 Mult = 1.4 Q's

To Be Added To The DX HONOR ROLL,
Please contact Ernest Kraus, KD2EAV
meanddelcanotc@verizon.net

GLOUCESTER COUNTY
AMATEUR·RADIO·CLUB
DX HONOR ROLL
NEW JERSEY

Name/Callsign	DXCC
Bill Grim, W0MHK	352
Dave Strout, W2YC	349
Edward De Fonzo, W2DE	339
Darrell Neron, AB2E	335
Bob Pantazes, W2ARP	290
John Hill, W2HUV	271
Gary Castellini, N2IEC	264
Vinnie Sallustio, N4NYY	262
Ken Denson, WB2P	248
Sheldon Parker, K2MEN	245
Jim Wright, N2GXJ	242
Tony Starr, K3TS	231
Dennis Sandole, K2SE	204
Howard Marder, WA2IBZ	154
Art Strong, KA0WS	147
Eric Morris, N2BRJ	144
Steve Farney, W2SEF	141
Phil Nunzio, WA3RGY	137
Rich Subers, W2RHS	124
Marc Federici, WM2Y	116
Bart Kleczynski, AC2PT	106
Ben Johnson, WB2GUK - New Entry	104
Chuck Capasso, WB2PGE	103
Harry Strahlendorf Jr, W3DNQ	87
Jim Clark, KA2OSV	71
Lee Marino, N2LAM	62
Updated As Of 06/26/2024	

A	L	A	M	O		M	I	S	T	S		H	T	S
W	I	D	E	R		O	N	E	A	W		A	I	L
O	M	A	N	I		L	U	C	I	A		M	M	I
L	A	R	S	O	N	E	R	A	P	P		V	I	N
			A	N	I		E	N	E		B	E	N	E
G	M	T		S	C	R		T	I	D	I	N	G	S
H	E	A	R		K	F	C			B	O	T		
I	M	P	O	S	S	I	B	I	L	I	T	I	E	S
		E	T	O			S	O	U		A	O	N	E
A	C	R	O	B	A	T		N	N	W		N	T	X
L	E	E	R		S	A	T		A	E	S			
I	R	C		Q	S	T	F	O	R	A	P	R	I	L
N	E	O		T	U	T	O	R		V	O	I	C	E
C	A	R		H	C	O	N	E		E	I	C	O	S
O	L	D		S	H	O	E	S		S	L	A	N	T

Crossword Puzzle Answers From Page 45

Hmm...It's Saturday and you want to know if someone is at the Clubhouse? Why not call and find out! What!!!

W2MMD Clubhouse : (856) 244-6914

(Please, no free solar panel calls!)

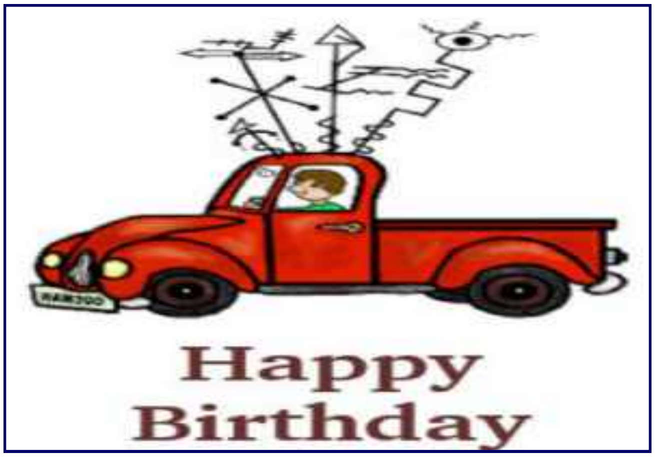
August Birthdays

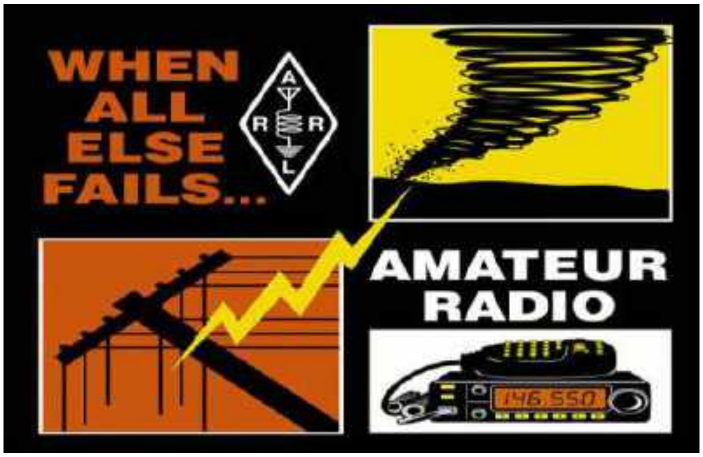
Congratulations To Our Members Who Are Celebrating A Birthday This Month

Dave Danichkin, KD2UXC
Paul Hart, KD2WKL
Deirdre Hebert, AD2GQ
Carl Jackson, KE2BEE
Harry Jackson, WB2GSF (President 1982)
Bob Jenson Jr, KC3WWL
Gary Kinney, KC2ULS
Jacques Latoison, KC3VYU
Chuck Lessley, KC3TZR
Dan McCormick III, KD2TUS
Jon Pearce, WB2MNF (President 2023, 2024)
Adam Sigmund
Court Smith, KD2SPJ
Harry Strahlendorf Jr, W3DNQ
Leonid Surnin, W2/UT5ZF
Brett Waller, K2BKW
Carl Wittig, N2CRW

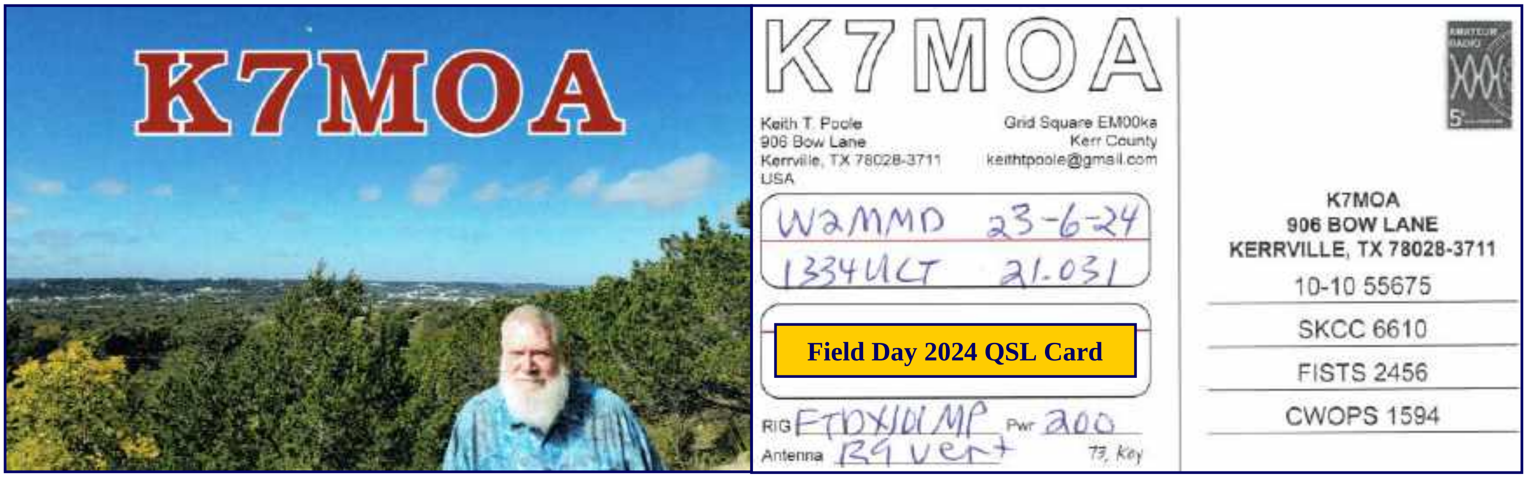
In Memoriam : August Birthdays

Paul Bergstrom, N2GIB
James Bray Sr, N2AKI
Edward Bubelis, N2LCN
Vernon Byrd, N2DRD
Edward Egolf, WA2ZMS
Charles Emmel Sr, KT2ZZ
Steven Fidler III, N2GVR
Richard Fitch, WA2YLC
Thomas Gordon Sr, KB2GI
Seth Horen, K1LOM
John Koch Jr, K2CR
John Lachenmayer, KB2RGX
James Mollica Sr, K2OWE
Curtis Myers, K2CWM
Bruce Painter, N2ASN
Charles Pennington, K3NMF
Salvatore Scibilia, WA2LKF
Donald Smith, WB2ZJF
Rev James Thompson III, N2EDK
Harry Wolf, KC2THV





For more information about balloon launches, call Jennifer @ 867-5309



K7MOA

Keith T. Poole
906 Bow Lane
Kerrville, TX 78028-3711
USA

Grid Square EM00ka
Kerr County
keithtpoole@gmail.com

W2MMD 23-6-24
1334UCT 21.031

Field Day 2024 QSL Card

RIG FTDX101MP Pwr 200
Antenna B9 vert
73, Key

K7MOA
906 BOW LANE
KERRVILLE, TX 78028-3711

10-10 55675
SKCC 6610
FISTS 2456
CWOPS 1594

Bike MS : City To Shore Ride 2024
September 28 - 29, 2024

Bike MS : Bike To The Bay (Delaware) 2024
October 5, 2024

N3MSS Amateur Radio Communications
Bike MS Volunteers
www.n3mss.org

Club Merchandise from the K2ZA Workshop
Contact John Zaruba Jr, K2ZA at k2za@icloud.com
Go To : https://gloucestercountyarc.weebly.com/club-merchandise.html

So you find our website confusing, can't find anything, Well So Do I!!

I have created a page *(What, Not Another Page!!)* called "Quick Links"

On this page you will find "Buttons" to some the most popular pages
I will add more as time goes on, but I hope this helps your journey navigating through your Club Website!
https://gloucestercountyarc.weebly.com/quick-links.html

Jersey String Band Report For August
By Glenn Dougherty, N2YIO

The Band just completed three very hot July 4th parades. First in Magnolia on June 30th then two on July 4th its self. We marched in the Paulsboro July 4th parade, then we took a short break and went to Runnemede's July 4th parade. We normally do three parades on July 4th but due to safety reasons we did not do the Mount Ephraim parade.

The Band has three parades in August, all on the boardwalk in Ocean City NJ. On Tuesday, July 23rd all three parades start at 7PM. We will do our first parade starting at 14th Street and marching along the boardwalk to 10th Street where we will meet another band coming from 6th Street at 8PM. Both bands will play a few songs, take some pictures with the visitors on the boardwalk then each band will march back to their starting point. On Thursday, August 8th we will do our second boardwalk parade again starting at 7PM. I think these last two dates we will be starting at 6th Street and meeting another band at 8th Street and then marching back to our starting point.

Hope maybe to see some Club members on the boardwalk at one of these parades and these parades are all weather and since podcast are popular, the band has started a biweekly podcast on (**https://youtu.be/zuOndep4RfI?si=cHEdG_LsYApYeSvH**) YouTube. It comes out every other Friday afternoon and features the members of the band and tells their story of how they got into the hobby. They may have other captains and other guests appear.

DELAWARE VALLEY RADIO ASSOCIATION

OPEN HOUSE & PICNIC

Sunday, August 18, 2024 @ 12:00 - 5:00 pm
798 Bear Tavern Road, Ewing, NJ
https://www.w2zq.com

Northeast

HamXposition

August 22-25, 2024

ARRL New England Division Convention

BE IN THE KNOW

The 2024 Northeast Hamxposition & New England Division Convention

The Northeast's largest gathering of radio amateurs, featuring in-person experts presenting on timely topics, trends and technologies

Thursday Night Comedy Kick-Off

Featuring Comedian Juston McKinney
Thursday, August 22, 2024 at 8 PM

Friday Night DX/Contest Banquet

Featuring Yuri Onipko, VE3DZ
Friday, August 23, 2024

Convention Keynote Address

Featuring Steve Goodgame, K5ATA
Saturday Morning, August 24, 2024

Saturday Grand Banquet Presentation

Featuring Dr. Tamitha Skov, WX6SWW
Saturday Evening, August 24, 2024

Vendors Include:

- ARRL
- Gold Medal Ideas
- Remote Ham Radio
- AG Custom Gifts
- Elecraft
- SteppIR
- Halibut Electronics
- VE2DX Electronics
- Nemal Electronics
- FlexRadio Systems
- Quicksilver Radio
- Reliance Antennas
- N3ZN Keys

Large Outdoor Flea Market • Over $8,000 in prizes

Preliminary Talks and Seminars Include:

- Mini Contest University
- Youth Forum
- PSKReporter: Then & Now
- Getting on EME
- MARS Forum
- FlexRadio: Not Your Dad's Old Radio
- AREDN: Another EmComm Tool
- Using the tinySA
- Elecraft K4 Update
- POTA Program Track
- Andy's Ham Radio Linux
- Choosing the Best Contest Radio
- New England Sci-Tech Kit Building
- ARRL Forum
- Winter Field Day: Embrace the "Chill"
- New England QRP Program Track
- STEAM and Teacher's Institute
- EmComm & Public Service Track, incl. EmComm Vehicle Display

August 22-25, 2024 • Marlborough, MA • www.hamxposition.org

August 2024 Contest Calendar - WA7BNM Contest Calendar : www.contestcalendar.com

August 2024

+	Walk for the Bacon QRP Contest	0000Z-0100Z, Aug 1 and 0200Z-0300Z, Aug 2
+	CWops Test	0300Z-0400Z, Aug 1
+	CWops Test	0700Z-0800Z, Aug 1
+	NRAU 10m Activity Contest	1800Z-1900Z, Aug 1 (CW) and 1900Z-2000Z, Aug 1 (SSB) and 2000Z-2100Z, Aug 1 (FM) and 2100Z-2200Z, Aug 1 (Dig)
+	SKCC Sprint Europe	2000Z-2200Z, Aug 1
+	NCCC FT4 Sprint	0100Z-0130Z, Aug 2
+	QRP Fox Hunt	0100Z-0230Z, Aug 2
+	Weekly RTTY Test	0145Z-0215Z, Aug 2
+	NCCC Sprint	0230Z-0300Z, Aug 2
+	K1USN Slow Speed Test	2000Z-2100Z, Aug 2
+	Batavia FT8 Contest	0000Z, Aug 3 to 2359Z, Aug 4
+	10-10 Int. Summer Contest, SSB	0001Z, Aug 3 to 2359Z, Aug 4
+	European HF Championship	1200Z-2359Z, Aug 3
+	WAB 144 MHz Low Power Phone	1400Z-1800Z, Aug 3
+	ARRL 222 MHz and Up Distance Contest	1800Z, Aug 3 to 1800Z, Aug 4
+	North American QSO Party, CW	1800Z, Aug 3 to 0559Z, Aug 4
+	Hemus VHF Contest - 144 MHz	0600Z-1359Z, Aug 4
+	SARL HF Phone Contest	1400Z-1700Z, Aug 4
+	K1USN Slow Speed Test	0000Z-0100Z, Aug 5
+	ICWC Medium Speed Test	1300Z-1400Z, Aug 5
+	OK1WC Memorial	1630Z-1729Z, Aug 5
+	ICWC Medium Speed Test	1900Z-2000Z, Aug 5
+	ARS Spartan Sprint	0000Z-0200Z, Aug 6
+	Worldwide Sideband Activity Contest	0100Z-0159Z, Aug 6
+	ICWC Medium Speed Test	0300Z-0400Z, Aug 6
+	Phone Weekly Test	0230Z-0300Z, Aug 7
+	A1Club AWT	1200Z-1300Z, Aug 7
+	CWops Test	1300Z-1400Z, Aug 7
+	Mini-Test 40	1700Z-1759Z, Aug 7
+	VHF-UHF FT8 Activity Contest	1700Z-2100Z, Aug 7
+	Mini-Test 80	1800Z-1859Z, Aug 7
+	CWops Test	1900Z-2000Z, Aug 7
+	CWops Test	0300Z-0400Z, Aug 8
+	CWops Test	0700Z-0800Z, Aug 8
+	NCCC FT4 Sprint	0100Z-0130Z, Aug 9
+	QRP Fox Hunt	0100Z-0230Z, Aug 9
+	Weekly RTTY Test	0145Z-0215Z, Aug 9
+	NCCC Sprint	0230Z-0300Z, Aug 9
+	K1USN Slow Speed Test	2000Z-2100Z, Aug 9
+	WAE DX Contest, CW	0000Z, Aug 10 to 2359Z, Aug 11
+	FISTS Saturday Sprint	0000Z-2359Z, Aug 10
+	SARL Youth QSO Party	1200Z-1300Z, Aug 10
+	YB Bekasi Merdeka Contest	1200Z, Aug 10 to 1159Z, Aug 11
+	SKCC Weekend Sprintathon	1200Z, Aug 10 to 2400Z, Aug 11
+	Kentucky State Parks on the Air	1400Z-2200Z, Aug 10
+	Maryland-DC QSO Party	1400Z, Aug 10 to 0400Z, Aug 11
+	50 MHz Fall Sprint	1800Z-2200Z, Aug 10
+	MMMonVHF/DUBUS 144 MHz Meteorscatter Sprint Contest	2200Z, Aug 10 to 2159Z, Aug 12
+	SARL HF Digital Contest	1300Z-1600Z, Aug 11
+	K1USN Slow Speed Test	0000Z-0100Z, Aug 12
+	4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Aug 12
+	ICWC Medium Speed Test	1300Z-1400Z, Aug 12
+	OK1WC Memorial	1630Z-1729Z, Aug 12
+	ICWC Medium Speed Test	1900Z-2000Z, Aug 12
+	Worldwide Sideband Activity Contest	0100Z-0159Z, Aug 13
+	ICWC Medium Speed Test	0300Z-0400Z, Aug 13
+	DARC FT4 Contest	1900Z-2000Z, Aug 13
+	NAQCC CW Sprint	0030Z-0230Z, Aug 14
+	Phone Weekly Test	0230Z-0300Z, Aug 14
+	A1Club AWT	1200Z-1300Z, Aug 14
+	CWops Test	1300Z-1400Z, Aug 14
+	Mini-Test 40	1700Z-1759Z, Aug 14
+	VHF-UHF FT8 Activity Contest	1700Z-2100Z, Aug 14
+	Mini-Test 80	1800Z-1859Z, Aug 14
+	CWops Test	1900Z-2000Z, Aug 14
+	Walk for the Bacon QRP Contest	0000Z-0100Z, Aug 15 and 0200Z-0300Z, Aug 16
+	CWops Test	0300Z-0400Z, Aug 15
+	CWops Test	0700Z-0800Z, Aug 15
+	NTC QSO Party	1900Z-2000Z, Aug 15
+	NCCC FT4 Sprint	0100Z-0130Z, Aug 16
+	QRP Fox Hunt	0100Z-0230Z, Aug 16

August 2024 Contest Calendar - Continued on page 58

August 2024 Contest Calendar - Continued from page 57

+	Weekly RTTY Test	0145Z-0215Z, Aug 16
+	NCCC Sprint	0230Z-0300Z, Aug 16
+	K1USN Slow Speed Test	2000Z-2100Z, Aug 16
+	SARTG WW RTTY Contest	0000Z-0800Z, Aug 17 and 1600Z-2400Z, Aug 17 and 0800Z-1600Z, Aug 28
+	Russian District Award Contest	0800Z, Aug 17 to 0800Z, Aug 18
+	ARRL 10 GHz and Up Contest	0900Z, Aug 17 to 0759Z, Aug 19
+	Keyman's Club of Japan Contest	1200Z, Aug 17 to 1200Z, Aug 18
+	Feld Hell Sprint	1600Z-1759Z, Aug 17
+	North American QSO Party, SSB	1800Z, Aug 17 to 0559Z, Aug 18
+	CVA DX Contest, CW	2100Z, Aug 17 to 2100Z, Aug 18
+	FISTS Sunday Sprint	0000Z-2359Z, Aug 18
+	NJQRP Skeeter Hunt	1700Z-2100Z, Aug 18
+	ARRL Rookie Roundup, RTTY	1800Z-2359Z, Aug 18
+	Run for the Bacon QRP Contest	2300Z, Aug 18 to 0100Z, Aug 19
+	K1USN Slow Speed Test	0000Z-0100Z, Aug 19
+	ICWC Medium Speed Test	1300Z-1400Z, Aug 19
+	OK1WC Memorial	1630Z-1729Z, Aug 19
+	ICWC Medium Speed Test	1900Z-2000Z, Aug 19
+	Worldwide Sideband Activity Contest	0100Z-0159Z, Aug 20
+	ICWC Medium Speed Test	0300Z-0400Z, Aug 20
+	Phone Weekly Test	0230Z-0300Z, Aug 21
+	A1Club AWT	1200Z-1300Z, Aug 21
+	CWops Test	1300Z-1400Z, Aug 21
+	VHF-UHF FT8 Activity Contest	1700Z-2100Z, Aug 21
+	Mini-Test 40	1700Z-1759Z, Aug 21
+	Mini-Test 80	1800Z-1859Z, Aug 21
+	CWops Test	1900Z-2000Z, Aug 21
+	CWops Test	0300Z-0400Z, Aug 22
+	CWops Test	0700Z-0800Z, Aug 22
+	NCCC FT4 Sprint	0100Z-0130Z, Aug 23
+	QRP Fox Hunt	0100Z-0230Z, Aug 23
+	Weekly RTTY Test	0145Z-0215Z, Aug 23
+	NCCC Sprint	0230Z-0300Z, Aug 23
+	K1USN Slow Speed Test	2000Z-2100Z, Aug 23
+	SCRY/RTTYOps WW RTTY Contest	2200Z, Aug 23 to 1200Z, Aug 24 and 1200Z-2359Z, Aug 25
+	ARRL EME Contest	0000Z, Aug 24 to 2359Z, Aug 25
+	Hawaii QSO Party	0400Z, Aug 24 to 0400Z, Aug 26
+	ALARA Contest	0600Z Aug 24 to 0559Z, Aug 25
+	U.S. Islands QSO Party	1200Z, Aug 24 to 0300Z, Aug 25
+	World Wide Digi DX Contest	1200Z, Aug 24 to 1200Z, Aug 25
+	YO DX HF Contest	1200Z, Aug 24 to 1200Z, Aug 25
+	Kansas QSO Party	1400Z, Aug 24 to 0200Z, Aug 25 and 1400Z-2000Z, Aug 25
+	Ohio QSO Party	1600Z, Aug 24 to 0400Z, Aug 25
+	CVA DX Contest, SSB	2100Z, Aug 24 to 2100Z, Aug 25
+	SARL HF CW Contest	1400Z-1700Z, Aug 25
+	K1USN Slow Speed Test	0000Z-0100Z, Aug 26
+	QCX Challenge	1300Z-1400Z, Aug 26
+	ICWC Medium Speed Test	1300Z-1400Z, Aug 26
+	OK1WC Memorial	1630Z-1729Z, Aug 26
+	ICWC Medium Speed Test	1900Z-2000Z, Aug 26
+	QCX Challenge	1900Z-2000Z, Aug 26
+	Worldwide Sideband Activity Contest	0100Z-0159Z, Aug 27
+	ICWC Medium Speed Test	0300Z-0400Z, Aug 27
+	QCX Challenge	0300Z-0400Z, Aug 27
+	SKCC Sprint	0000Z-0200Z, Aug 28
+	Phone Weekly Test	0230Z-0300Z, Aug 28
+	A1Club AWT	1200Z-1300Z, Aug 28
+	CWops Test	1300Z-1400Z, Aug 28
+	Mini-Test 40	1700Z-1759Z, Aug 28
+	Mini-Test 80	1800Z-1859Z, Aug 28
+	CWops Test	1900Z-2000Z, Aug 28
+	CWops Test	0300Z-0400Z, Aug 29
+	CWops Test	0700Z-0800Z, Aug 29
+	NCCC FT4 Sprint	0100Z-0130Z, Aug 30
+	QRP Fox Hunt	0100Z-0230Z, Aug 30
+	Weekly RTTY Test	0145Z-0215Z, Aug 30
+	NCCC Sprint	0230Z-0300Z, Aug 30
+	K1USN Slow Speed Test	2000Z-2100Z, Aug 30
+	Feld Hell Sprint	0000Z-2359Z, Aug 31
+	UK/EI DX Contest, SSB	1200Z, Aug 31 to 1200Z, Sep 1
+	Russian WW MultiMode Contest	1200Z, Aug 31 to 1159Z, Sep 1
+	Colorado QSO Party	1300Z, Aug 31 to 0400Z, Sep 1

2024 Club Committees

Standing Committees	Committee Chairs
Budget	**John O'Connell, K2QA**
Constitution & By-Laws	**Ron Block, NR2B**
Education	**Chris Prioli, AD2CS**
Field Day	**Tony Starr, K3TS**
Hamfest	**Sheldon Parker, K2MEN and Bill Price, NJ2S**
Health, Welfare, & Silent Keys	**Bill Price, NJ2S**
Hospitality	**Jeff Garth, WB2ZBN**
Membership	**Chris Prioli, AD2CS**
Membership Badges	**Chris Prioli, AD2CS**
Nominations	**Jon Pearce, WB2MNF**
Publicity	**Mike Resnick, N2WOQ**
Repeaters	***Open Chair***
W2MMD Clubhouse Site	**Al Arrison, KB2AYU**

Activity Committees	Committee Chairs
Awards & Certificates	**GCARC Board of Directors**
Club Photographer	**Phil Nunzio, WA3RGY**
Club Publications & Historian	**Jeff Garth, WB2ZBN**
Contests	**Tony Starr, K3TS**
GCARC Foxhunts	**Jim Wright, N2GXJ**
GC-ARES Emergency Coordinator	**Bob Keogh, KD2NEC**
Holiday Dinner Party	**Frank Romeo, N3PUU & Kathy Romeo**
License Testing/VEC Liaison	**Gary Reed, N2QEE**
Membership Roster Database	**Jeff Garth, WB2ZBN**
Programs : General Membership Meetings	**Ron Block, NR2B**
Radio Nets	***Open Chair***
Technical (Tech Saturday, TechNets)	**Jon Pearce, WB2MNF**
W2MMD License Trustee	**Darrell Neron, AB2E**
W2MMD Special Event Station	**Mark Gottlieb, KK2L**

GCARC <*at*> Mailman <*dot*> QTH <*dot*> Net e-mail reflector guidelines

1. **No attachments** (e.g. pictures, files) are allowed on the reflector.
2. If you have Club-related pictures that you would like to share, you can send them to the webmaster, he will put them on the website and will send out a general e-mail to all the members.
3. Otherwise, the pictures will have to be sent to the members' addresses.
4. URLs/Hyperlinks are acceptable on the reflector.
5. Do not send any messages with e-mail addresses in the **BCC** (**Blind Carbon Copy**) field. The message will be rejected. Use only the **To:** or **CC:** fields.
6. Members are subscribed to the reflector using the member's e-mail address from the roster database. You must use that address when sending an e-mail via the reflector.
7. If you use another address on the reflector, the message will get rejected or "*bounced*", because the reflector does not recognize that address. Whenever a message sent to reflector is rejected or *"bounced"* for various reasons, the administrator has to log-in to the Mailman.QTH website and approve the message.

The W2MMD Repeaters

2 Meter Repeater
Output : 147.180 MHz
Input : 147.780 MHz
Offset : +600 kHz - PL : 131.8 Hz
(Conventional FM plus C4FM Capability)
EchoLink : W2MMD-R

70 cm Repeater
Output : 442.100 MHz
Input : 447.100 MHz
Offset : +5 MHz - PL : 131.8 Hz
(Conventional FM plus C4FM Capability)

The above repeaters are both
located in Pitman, NJ
GPS : 39.728481°, -75.131088°

1.25 Meter Repeater
Output : 224.660 MHz
Input : 223.060 MHz
Offset : -1.6 MHz - PL : 131.8 Hz
Location : Sewell, NJ
GPS : 39.746738°, -75.077094°

SKYWARN™ Net
Sunday @ 1930 : 147.180 MHz Repeater

Gloucester County ARES Net
Sunday @ 2000 : 147.180 MHz Repeater

GCARC TechNet ZOOM Forum
Available Every Monday @ 1930 Hours
Join ZOOM Meeting Link :
https://bit.ly/3K8bWwj

Tuesday AfterNoon 2M Net @ 1200 Hours

Tuesday & Thursday 10 Meter Net @ 1930 Hours
28.465 MHz or 28.475 MHz

Monday & Thursday Night 40M Net
1930 Hours
7.230 MHz (+/- 5 or 10 kHz)

Thursday 2M Net @ 2000 Hours

Meeting Calendar

General Membership Meeting
Wednesday, August 7, 2024
1900 Hours
Pfeiffer Community Center
Simulcast Live on ZOOM
Meeting ID : 943 0211 9674
Passcode : 843147
Join ZOOM Meeting Link :
https://bit.ly/44P4HCU

Board of Directors Meeting
Wednesday, August 21, 2024
1900 Hours
W2MMD Clubhouse

"There's More To Ham Radio Than
You Can Possibly Do!"
- K3TS

"The big thing about being in a club and
being a "Ham" is to help each other
when there is a need "
- W2SEF

*** Badges ***

Need a new or replacement badge
Contact "*The Badge Man*"

Chris Prioli, AD2CS
chris@ad2cs.com

Question Pool Answers : E1B01:D; E1B02:A; E1B03:A; E1B04:C; E1B05:C; E1B06:A; E1B07:C; E1B08:D;
E1B09:C; E1B10:A; E1B11:B

73 Gloucester County Amateur Radio Club - P. O. Box 370 - Pitman, NJ 08071 Ω